

# A landscape archaeological perspective on the functioning of a rural cult place in Samnium: field surveys around the sanctuary of S. Giovanni in Galdo (Molise)

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## Introduction

The appearance of monumental rural cult places in the non-urbanised areas of Central-Southern Italy in the Hellenistic period has generally been interpreted in the light of large-scale economic and political processes. For example, cult places have been seen as frontier shrines marking the territories of different Italic tribes (e.g. D'Ercole, Orfanelli and Riccitelli, 1997; Carafa, 1998), or as 'road-shrines' along the long-distance transhumance routes which criss-crossed Central-Southern Italy (e.g. Van Wonterghem, 1999). Other studies have interpreted the emergence of a sacred landscape, especially in Samnium, as a manifestation of supra-local identities connected with state formation processes (e.g. Coarelli and La Regina, 1984; La Regina, 1989; cf. discussions in Tagliamonte, 1997; Bispham, 2007; Stek, 2009).

In this paper, we aim to demonstrate that the local dimension of these cult places should be included in this debate because this aspect can throw new light on the genesis and functioning of Italic cult places. As yet, little is known about the spatial context of sanctuaries in Central and Southern Italy (discussion in Stek, 2009: 53-77). One effective means to address this problem is to survey the immediate surroundings of Italic cult places intensively. This paper presents the results of a case-study around the sanctuary of S. Giovanni in Galdo, Colle Rimontato, in modern Molise (Fig. 1; for preliminary publications, see Stek and Pelgrom, 2005; Stek, 2009: 79-106). This cult place was frequented from the late fourth century BC into the Roman imperial period, with a monumental phase dated to the late second century BC.<sup>1</sup>

During several campaigns conducted between 2004 and 2008, we investigated an area of 7 km<sup>2</sup> (Fig. 2). In 3.4 km<sup>2</sup> of this sample area the visibility conditions made

<sup>1</sup> La Regina, 1966: 261; La Regina, 1970, 196; 1978b; Di Niro, 1980; Coarelli and La Regina, Strazzulla, 1971: 16; La Regina, 1976: 237-241; Di Niro, 1977: 38-40; Di Niro, 1978a; Di Niro, 1984: 295-298; Zaccardi, 2007; Stek, 2009: 35-52, 96-104.

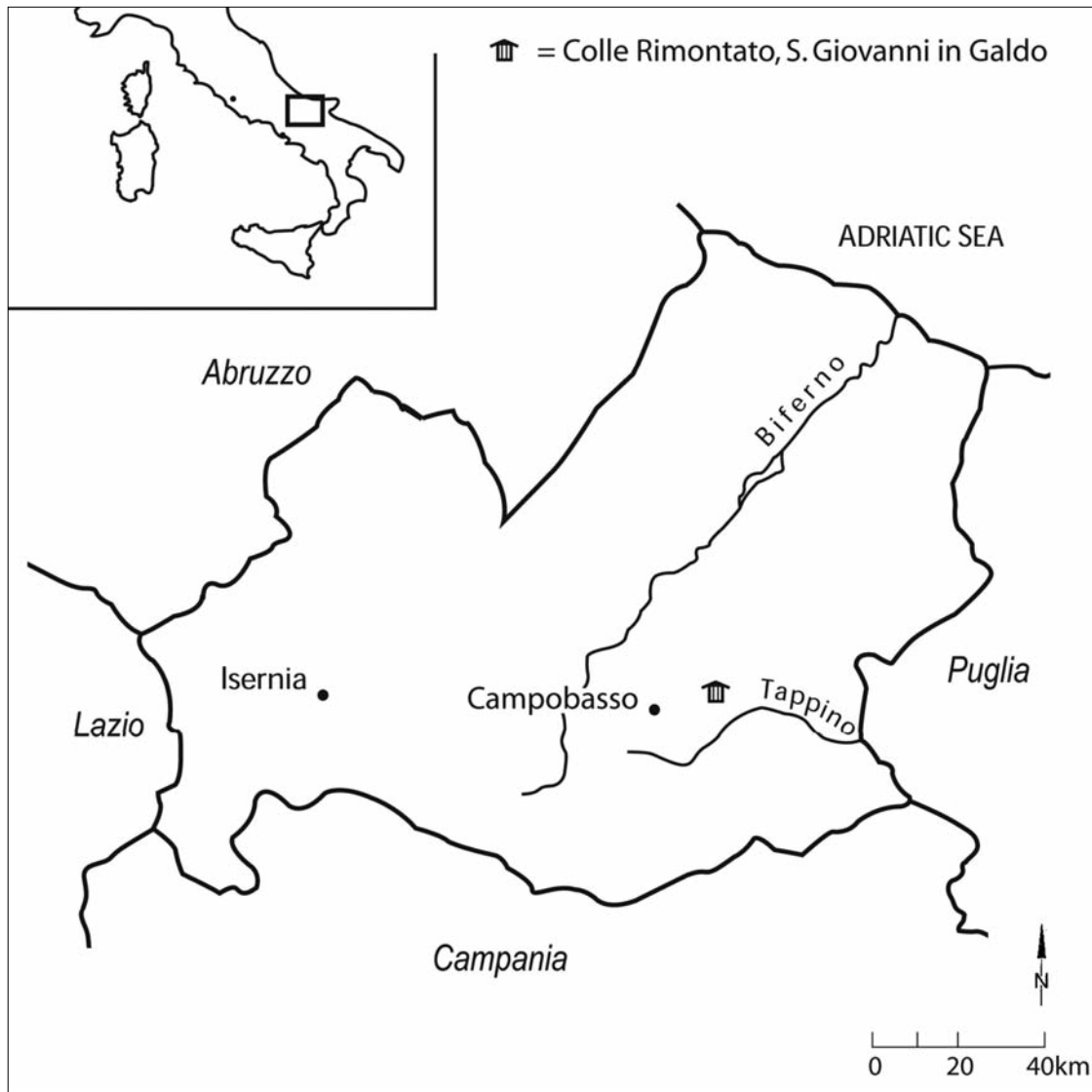


Fig. 1. Location of the sanctuary of S. Giovanni in Galdo, Colle Rimontato.

intensive surveys using an off-site sample strategy possible. In addition, electric resistivity and geomagnetic prospection has been carried out in a selected number of sites. To understand better the relationship between the pattern of settlement in the area and the cult place over time, some of the excavation finds of the cult place itself, which was excavated by the Soprintendenza archeologica del Molise in the 1970s under the direction of A. Di Niro, have been restudied.

### Research methodology

We surveyed the sample area in units with a maximum of 50 by 100 m (0.5 ha) at 10 m intervals between field walkers, which corresponds to a 20 per cent coverage.<sup>2</sup> All

<sup>2</sup> This field recording strategy is largely based on previous experiences during large-scale surveys executed in the context of the RPC project Regional Pathways to Complexity of the

Free University of Amsterdam and de Rijksuniversiteit Groningen (Burgers, 2002; Attema, Burgers and van Leusen 2011).

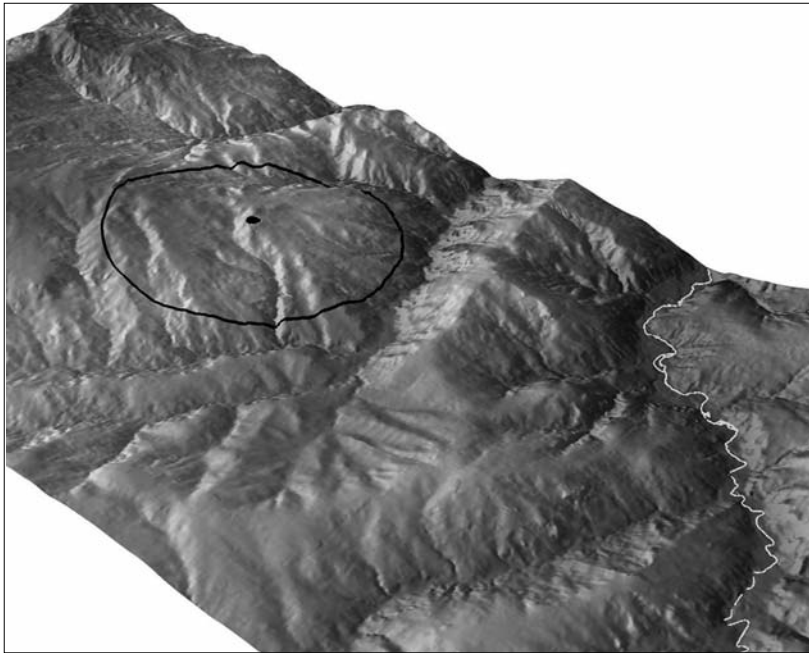


Fig. 2. 3D model of the landscape around the sanctuary S. Giovanni in Galdo, Colle Rimontato; the research area is indicated with a circle.

artefacts were collected, washed and classified (Fig. 3). In units in which there were too many tiles to collect, these were counted in small sample areas of 1 m<sup>2</sup> to make an estimate of the overall quantity. The fields immediately surrounding the cult place have been sampled more intensively in units of 10 x 10 m, giving a theoretical coverage of 100 per cent. The result is a detailed artefact density contour map of the area around the temple. The idea behind this strategy was to be able to detect possible adjacent structures. This 100 per cent coverage sampling strategy also helped us to form as complete an image as possible of the finds belonging to the sanctuary site, enabling a refinement of the chronology and the repertoire of small finds.

Site identification was primarily based on observed relative contrasts in find densities. For Hellenistic and Roman sites, a general minimum of five shards per square meter has been adopted. After having pinpointed potential sites the standard transect survey was completed before investigating the high density areas in more detail. In drawing the boundaries of the halo's and nuclei, relative contrasts in find densities were preferred to fixed thresholds. Additional diagnostic finds were collected for dating and functional analysis. A handheld GPS was used to record the coordinates of the halo and nuclei of the find concentrations encountered. During the 2005 survey, PDA computers with a connected GPS were used in the field for both navigation and data input.<sup>3</sup> Both survey unit boundaries and site contours were mapped on 1:10.000 maps of the region.

For each unit, the land use, erosion processes when noted, tillage and various visibility factors (stones, shade, vegetation, soil humidity, presence of recent material) were recorded. These factors determined the final visibility (Fig. 4). Observations about the geo-morphological situation, present land use, tillage and modern alterations to the landscape were also noted. This information about the landscape was integrated into the chronological and functional analysis of the finds

<sup>3</sup> A software application was designed for this purpose in collaboration with the SpinLAB of the VU University Amsterdam (Wagtendonk and De Jeu, 2007).

Fig. 3. Finds of the first visit per category: IMP-impasto; BG-black gloss; ITS-Italian sigillata; ARS-African Red Slip.

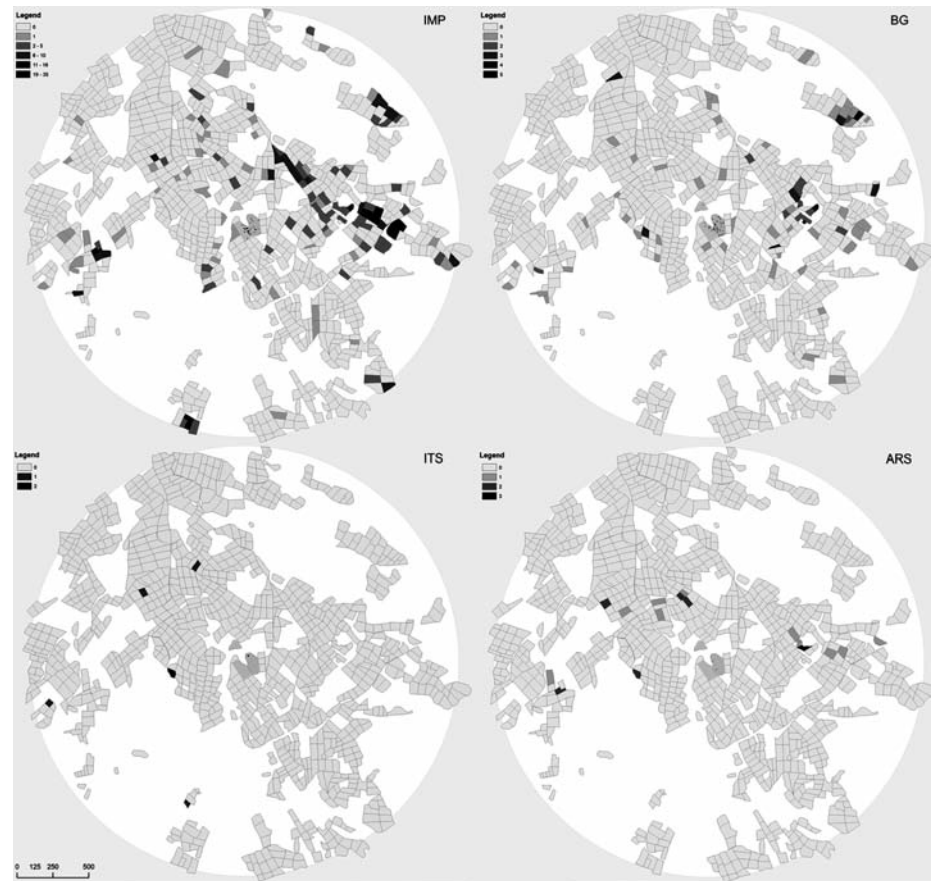


Fig. 4. Research area around the sanctuary of S. Giovanni in Galdo indicating final visibility (1: low, 5: high).



in a digital environment. Various spatial and functional analyses could therefore be carried out, and thus our field data could be corrected for biases which amongst other results has resulted in the recognition of sites missed in the field (see Appendix I; cf. also below).

## Results

### *The Pre- and Proto-historic periods*

During the excavations and intensive survey in the immediate surroundings of the sanctuary of Colle Rimontato, no traces of Iron Age or Archaic occupation and activity have been recognized (Fig. 5). Archaeological evidence belonging to this period is mostly concentrated in an area 700 m to the east of the sanctuary, in the vicinity of the so-called Fonte Coverchiata. Here, a diffuse scatter covering about 2 ha of impasto ceramics dating to the Iron Age and Archaic periods has been found (G3). About 180 shards were collected in our standard 20 per cent coverage survey. The more common impasto forms were storage and cooking vessels of a thick, porous, dark brown to black fabric and, in smaller numbers, drinking cups and small vessels of a reddish-brown or grey fabric (often burnished). The assemblage of domestic pottery, loom weights and grindstone points towards a domestic function. The size of the scatter and the number of artefacts suggest an agglomeration of several domestic units.<sup>4</sup> The best comparable sites in the region are Phase I of the Fonte del Romito settlement and the agglomerations recognised by Barker in the lower and middle Biferno Valley (Rainini, 1996; Barker, 1995: 162-163). Excavations of the Iron Age settlements of Fonte del Romito and Arcora (Campomarino) have revealed oval or apsidal shaped wattle-and-daub huts of considerable size (c. 10x4 m) (Di Niro, 1991; Rainini, 1996).<sup>5</sup>

Towards the eastern limit of the area, near the perennial spring of Fonte Coverchiata, an exceptionally dense scatter of high quality Iron Age and Archaic impasto pottery has been discovered (site G21). In addition, a loom weight and a stone object with circular motifs and a small terracotta figurine were found. The archaeological complex is puzzling. In general, excavated domestic Iron Age sites in the region do not yield such large numbers of high quality finds. This 'out of the ordinary' assemblage suggests a function which transcends usual domestic use. The period was characterised by increasing social complexity and a strong hierarchisation of society (Barker, 1995: 159-181; Tagliamonte, 1997: 34-50). Tentatively, this archaeological complex can be associated with processes of growing social stratification and emergence of elites. Consequently, an elite residence or a cultic function (or a combination of both) seem the most likely options.<sup>6</sup>

Of coeval date (at least in the later, Archaic phase) is a necropolis located in a small gorge (Site G22) to the north of the Iron Age settlement. There is a notable height difference between the contemporaneous sites, which are nowadays connected by a steep small rural road. The site is characterised by the presence of numerous small scatters of mostly high quality impasto and plain ware ceramics

<sup>4</sup> The standard set for identifying a single Iron Age domestic site by Barker, 1995: 160-162 is c. 20 shards with a scatter of about 50x50 m.

<sup>5</sup> Several pieces of wattle-and-daub have been found in G3.

<sup>6</sup> The results of the geophysical prospection of

this site are difficult to interpret. Anomalies have been detected directly to the south-west of the actual surface scatter. They indicate the presence of a rectilinear feature. Less clear anomalies have been detected at location of the site itself.

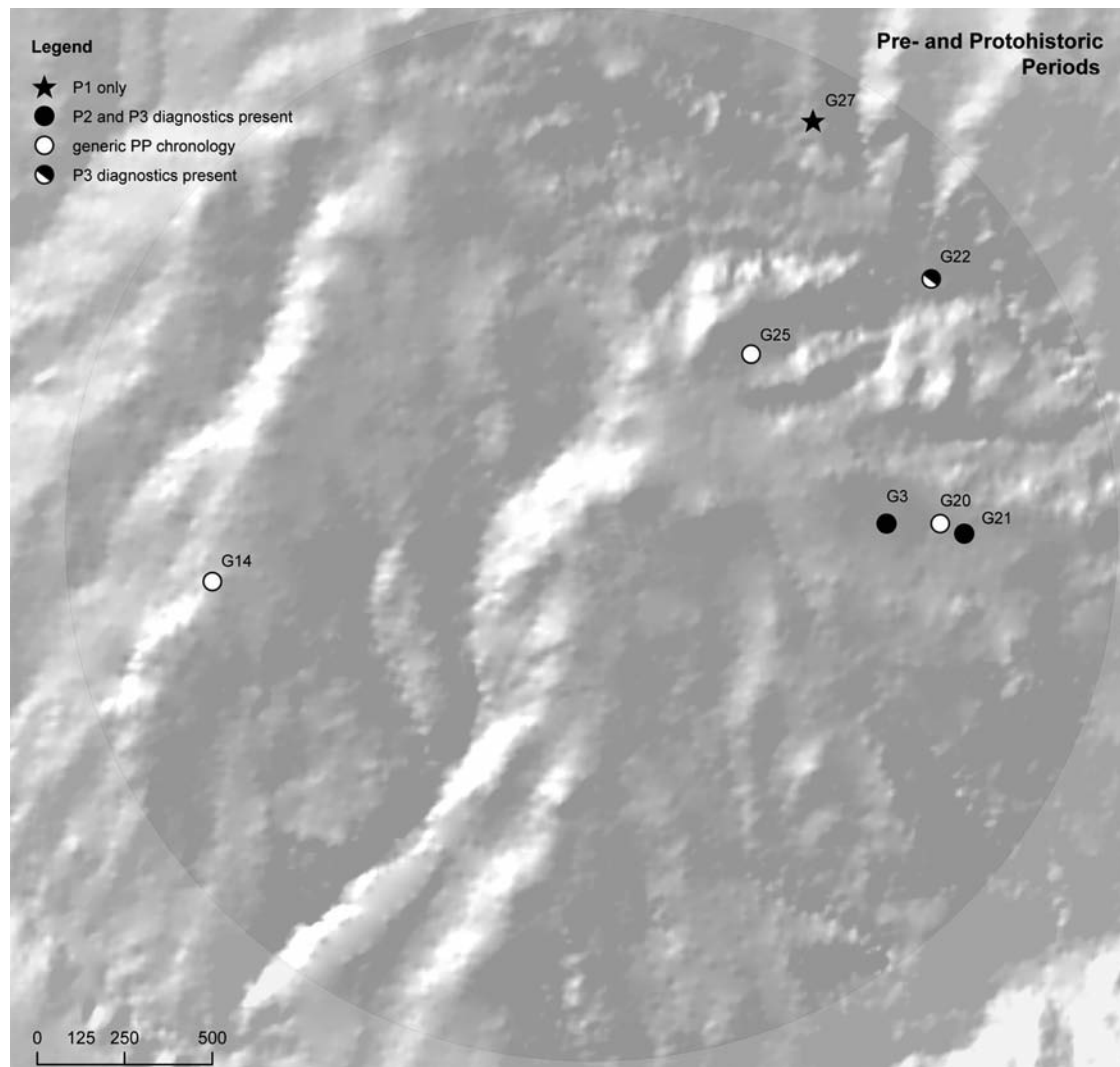


Fig. 5. Sites of the Pre- and Protohistoric periods.

which stretch out over an area of c. 3 hectares. The impasto pottery consists mostly of open forms, often with a burnished dark grey surface, like Etruscan *bucchero*. Similar assemblages have been recognised in the Campochiaro sanctuary and the Pozzilli cemetery (Capini, 1980; 1984; 1991b). These are dated from the sixth to fourth centuries BC.

A few other impasto sites have been identified in the sample area. They consist of small or very diffuse scatters (G14; G25). These correspond well with Barker's (Barker, 1995: 160) category of "probable settlement", interpreted as farms and small hamlets, whereas other sporadic finds could be interpreted as funerary debris (Fig. 3).

#### *The Hellenistic period*

In the period in which the Samnites first enter the literary record as a result of their expansion in the Tyrrhenian coastal areas and conflicts with Rome, the nucleated settlement (G3) near Fonte Coverchiata grew towards the west (G2) and now covered an area of roughly 10 ha (Fig. 6). Occupation in the late fourth and early third centuries BC is documented clearly by black gloss pottery and some coarse and plain

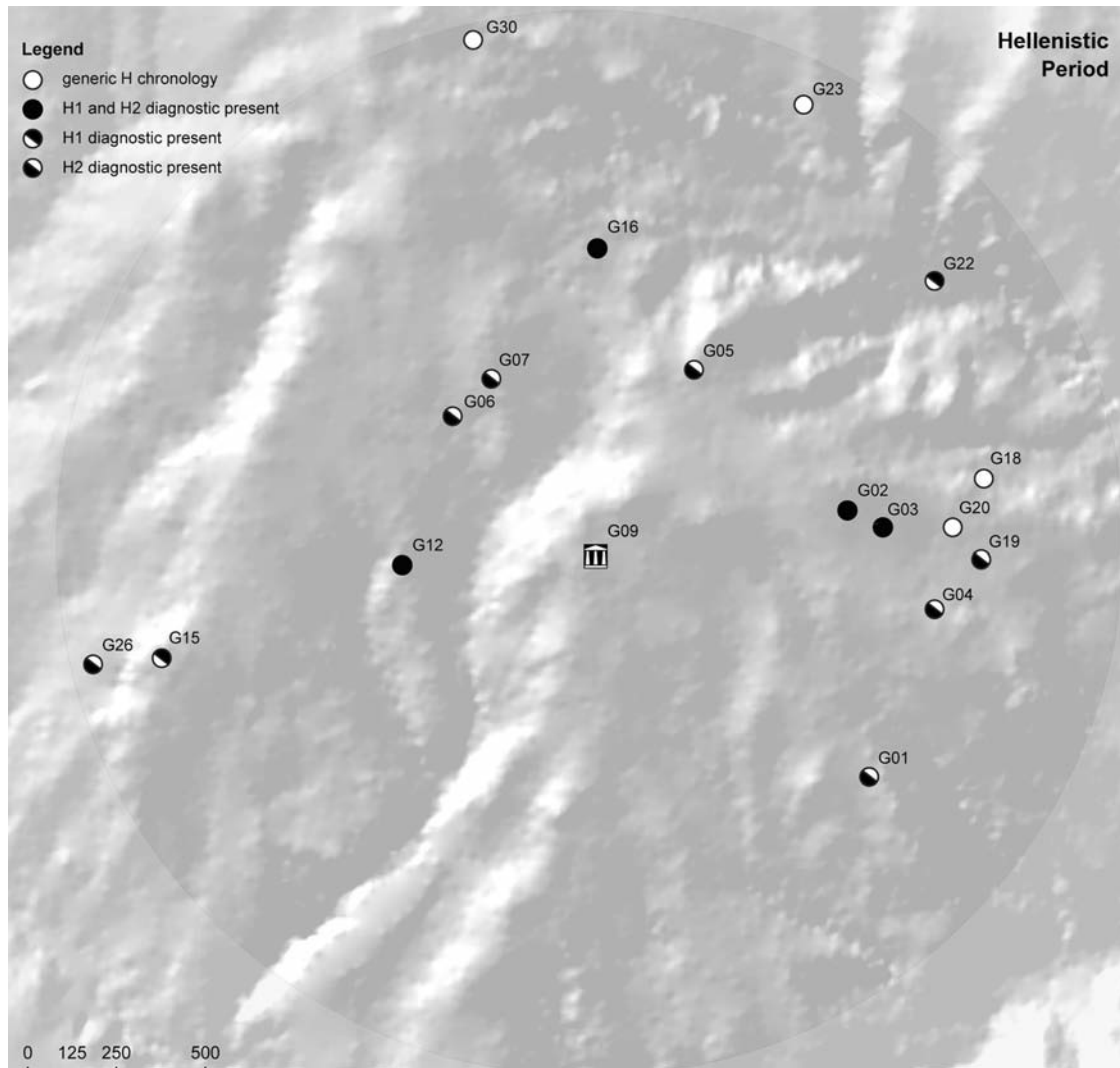


Fig. 6. Sites of the Hellenistic period.

wares which have good parallels in stratigraphical contexts in the region.<sup>7</sup> The black gloss ware is of a rather soft, often powdery fabric and has a pale or beige colour, whereas the gloss is usually matt and black/brownish in colour. Preliminary ceramological analysis suggests that the clays used come from the region (pers. comm. Keith Swift). Large amounts of tiles and other building materials (such as roughly dressed limestone blocks) were also present. Excavated settlements in the region, such as Fonte del Romito (Rainini, 1996) and San Vincenzo al Volturno (Bowes, Francis and Hodges, 2006), demonstrate the emergence of roofed structures with dry-laid stone fundaments; often organised around a courtyard, in this period (Di Niro and Petrone, 1993). In the data of the geophysical prospection rectangular features are clearly discernable (Fig. 7). These suggest that the settlement was not continuous, but consisted of several nuclei, spaced at intervals of several tens of metres.

Precisely in this period the first evidence for activity at the sanctuary site of Colle Rimontato is documented. Both the detailed survey in the immediate surroundings and

<sup>7</sup> Esp. in the sanctuary of Campochiaro (scarico Romito Phase II (Rainini, 1996).  
A: Capini, 1984) and the settlement at Fonte del

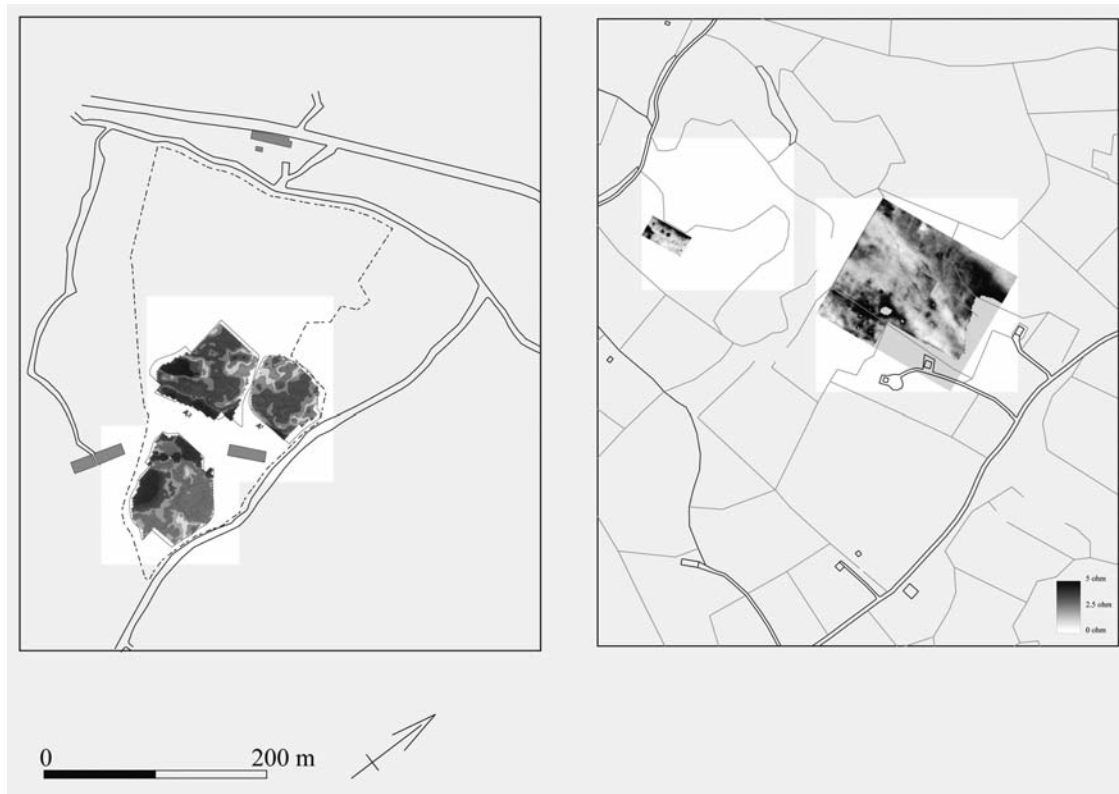


Fig. 7. Comparison between the results of geophysical prospection carried out at site G3 and in Fonte del Romito.

restudy of the excavation finds yielded black gloss forms dating to the late fourth and early third centuries BC, such as concave-convex cups of the Morel 2420 series, *skyphoi* and bowls (Stek, 2009: 96-100). Cultic assemblages of the same period, albeit rare, have been excavated in Campochiaro and Cupa (Gildone) (*Campochiaro* 1982, Capini, 1980; 1984; 1991a; 2003; Di Niro and Petrone, 1993; D'Amico, 1953; 1954). As yet few monumental remains have been associated with these early phases of the cult places. If this is the result of the later, often dramatic building activities in sanctuaries (especially in the third and second centuries) or simply the absence of monumental cult buildings in this period cannot be established at the present stage of research. We have recognised another potential cult site in the outer western limits of the research area (G15). Here, we found a relatively rich assemblage of fine wares and loom weights dating to the early Hellenistic period, which might relate to a small cult place and/or funerary activities.

From the latter half of the third century BC onwards (that is, the period after the Samnite Wars), the landscape of S. Giovanni in Galdo bears witness to significant changes. The necropolis (G22), still in use during the early Hellenistic period, has by now ceased to function. In the same period, numerous isolated small sites (with nuclei of a maximum 500 sq. m) scattered over the countryside begin to appear. This phenomenon reaches a peak in the second century BC, from which 10 small settlements have been recognised, resulting in a settlement density of circa 3 rural sites per surveyed sq. km. The typical assemblage of these sites consists of a large number of tiles and limestone blocks along with coarse kitchen and cooking wares, plus usually a few pieces of plain and black gloss table wares. The repertoire of collected black gloss forms was limited; especially numerous are plates of the Morel 2250 series, large numbers of which have also been found at the production site of



Monte Vairano (De Benedittis, 1988: 65-72). This could suggest that the table pottery of the S. Giovanni area was manufactured in the region.

In one of these small settlement sites of the later Hellenistic period (G4), electric resistivity prospection revealed a rectangular feature measuring c. 20 x 20 m, as well as two less marked rectilinear bands. The excavated farmstead at Cercemaggiore shows a similar lay-out and dimensions (19 x 17 m) (Di Niro and Petrone, 1993). This building presents a central courtyard around which several smaller rooms were located (Fig. 8).

Some of these rooms had domestic functions (for example, a hearth with associated kitchen pottery), whereas others had storage and productive functions related to agricultural activities.<sup>8</sup> The foundations and possibly also the standing walls of the Cercemaggiore farmstead consisted of roughly dressed limestone blocks

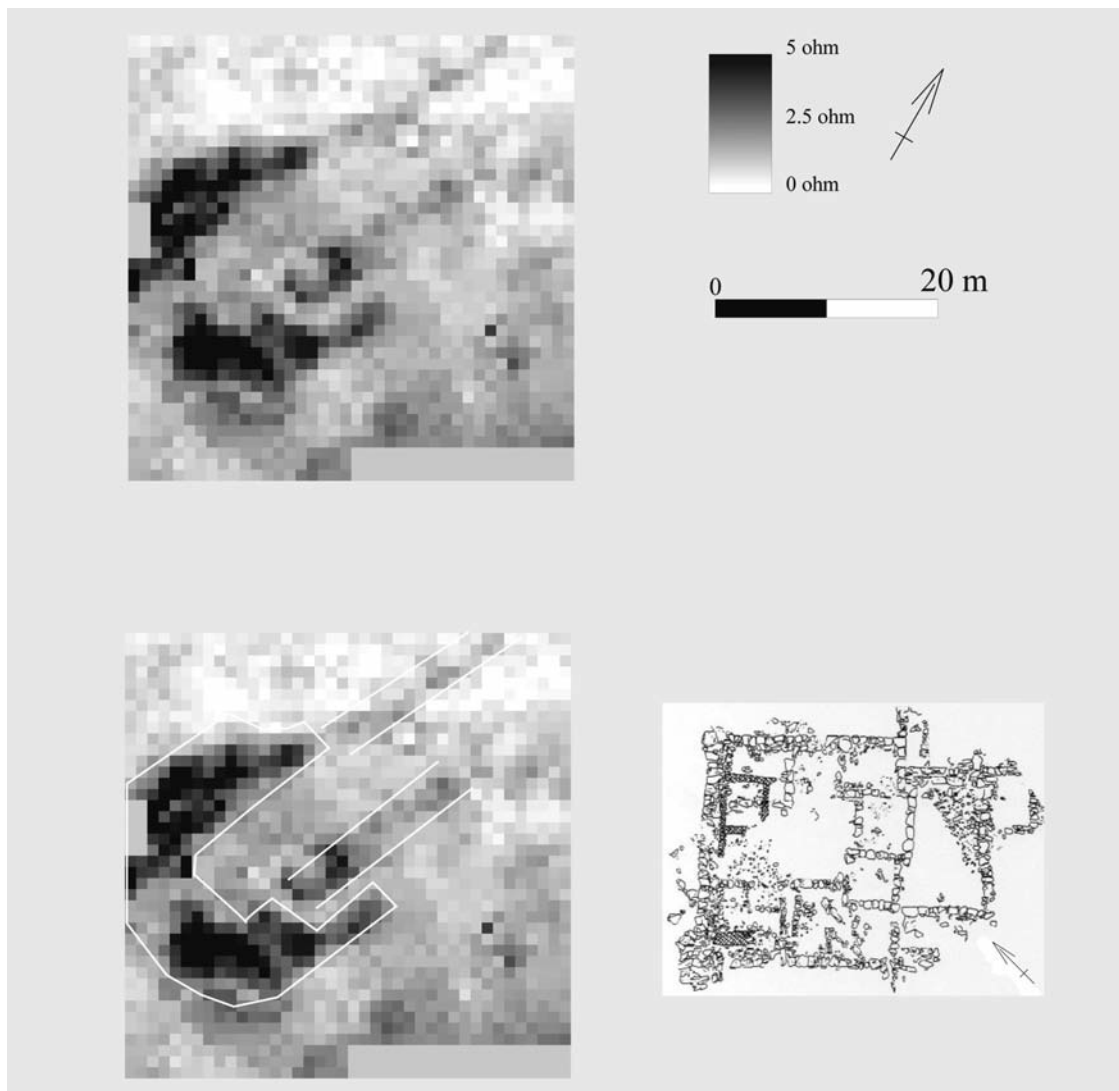


Fig. 8. Comparison between the results of geophysical prospection carried out at site G4 and the excavated farmstead at Cercemaggiore.

<sup>8</sup> Cf. also the first phase of the villa at Matrice, measuring 18 x 18 m (Lloyd and Rathbone, 1984; Lloyd, 1991). which presents a similar rectangular plan

and the roof was tiled. A large pile of such building materials was identified in the south-west corner of the site.

Overall, these results suggest that in the later Hellenistic period the landscape around the sanctuary of S. Giovanni in Galdo, Colle Rimontato witnessed an intensification in rural settlement and related agricultural production.

### *The Roman period*

The Social War and the subsequent military and political episodes do not appear to have greatly disrupted the settlement system in the S. Giovanni area (Fig. 9). Most sites which were occupied in the Hellenistic period show some evidence of continuity into the late Republican and early Imperial periods. For instance, the village site (G2-G3) continues to be frequented in this period. Only four sites (G4, G5, G15 and G23) produced no pottery which can be dated to the Roman era. Although the overall quantity of collected Italian sigillata (ITS) was very limited (see Fig. 3), it has appeared (albeit in very low numbers) at nine sites.<sup>9</sup> This could suggest

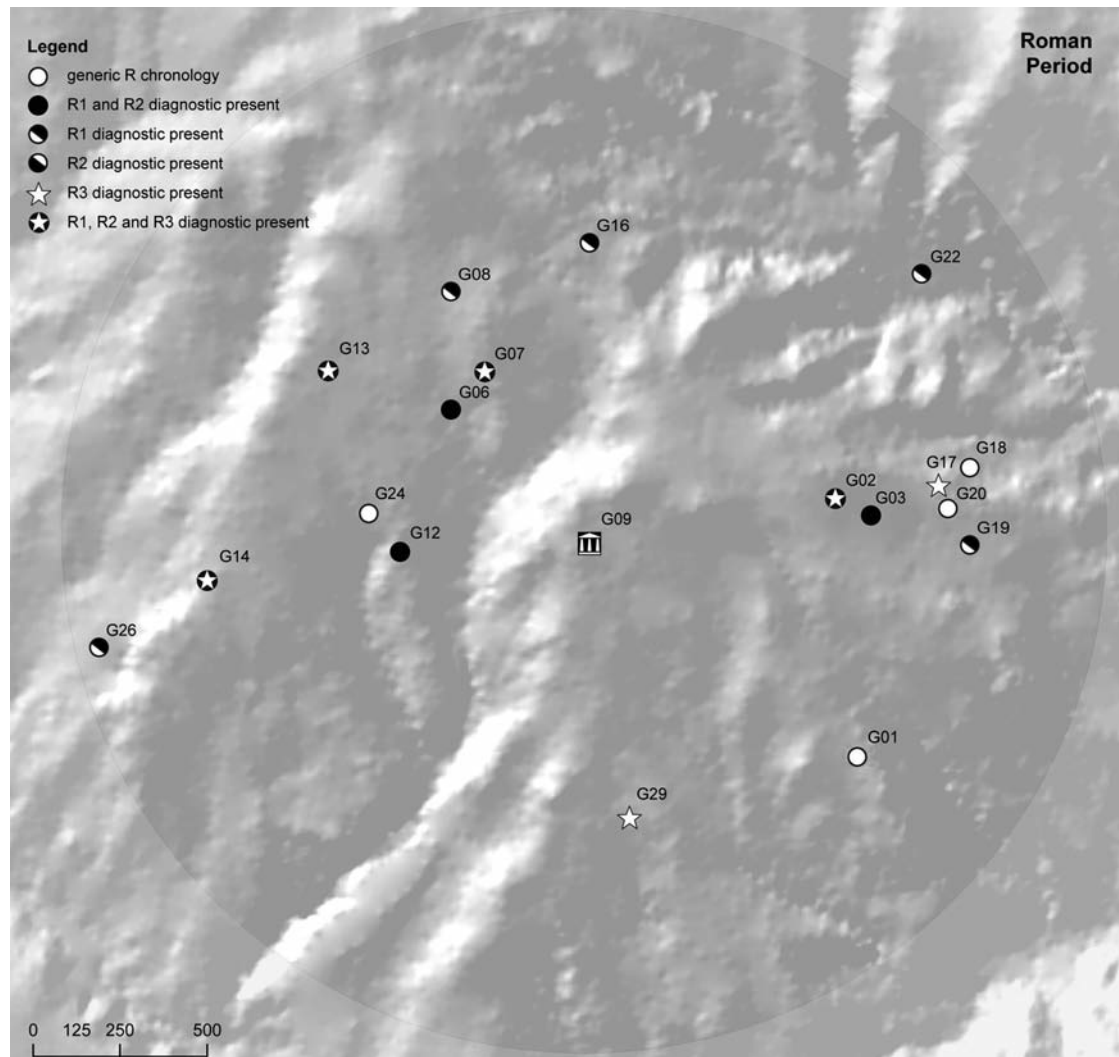


Fig. 9. Sites of the Roman period

<sup>9</sup> On three additional sites other diagnostic ceramics of this period have been identified.

that the low quantities of ITS are connected to different patterns of consumption and distribution rather than demographical developments (Patterson, 1987; 2006: 17-19). Occupation in this period is likely for another five sites (G2, G6, G18, G20, G24). Artefacts dated to both previous and subsequent periods in combination with assemblages of thin-walled and coarse wares which fit, but are not exclusively restricted to, this chronological horizon have been found in these sites. Moreover, new sites, which are located in the previously empty areas in the north-western part of the sample area, appear in this period. Therefore, the process of intensification and expansion of rural settlement which commenced in the Hellenistic period continues into the Roman period.

A notable difference with the preceding period, however, is the site hierarchy. While the scatters in the Hellenistic period were fairly uniform in terms of halo size, the recorded sizes for the Roman Imperial period display significant differences (see site catalogue and Fig. 11 for halo sizes). For the Hellenistic period, two dimensional categories of settlement sites can be discerned: the large village site measuring about 10 ha and rural farm sites with halos under 1 ha. In the Roman Imperial period, two new dimensional categories can be distinguished: one intermediate category with halos of about 2 ha (G13; G16), and one very large one of about 5 ha (G7, G14). This can very probably be connected with the development of a villa-based economy (cf. e.g. Ikeguchi, 1999-2000).

The very large Roman period scatters are characterised by piles of roughly trimmed limestone blocks, innumerable tiles and many hard-fired coarse wares and African red slip wares (almost exclusively forms Hayes 8, 9 and 61). Although black gloss and Italian sigillata ceramics were rare, they were present in most sites. The collected assemblages correspond remarkably well with that retrieved from the villa of Matrice, located about 5 km to the north-west of our research area (Lloyd and Rathbone, 1984; Lloyd, 1991). Excavations at Matrice under the direction of Lloyd revealed that, between the second century BC and the first century AD, a Samnite farm was replaced by a large villa occupying an area of 2500 sq. m. The villa was plainly decorated with relatively simple frescoes and mosaics and presents an elongated ground plan measuring more than 60 m. None of the large Roman period sites in our area shows evidence of elaborate architectural decoration, involving marble and mosaics. Site G14, for instance, where part of the structure was exposed by modern construction works, suggests a rather modest architectural make-up. Remains of an *opus spicatum* floor were found here, as well as standing walls of limestone blocks. A section with an ancient debris layer consisting of limestone blocks mixed with bricks is also clearly visible. A large part of the ceramics collected on these sites dates to the late antique period (AD 300-500), indeed some sites even seem to appear only in this period. This suggests that this area deviates from the general economic and demographic decline recorded for the wider region (Patterson, 1985; 1987; Barker, 1995: 225; Patterson, 2006: 80-82).

## Conclusions

The results of our study show that the cult place of S. Giovanni in Galdo, Colle Rimontato was not located in isolation. The cult place was installed in a landscape which had already been inhabited since the Iron Age and which presents evidence for functional and social differentiation. During the first stages of frequentation of the cult place, in the late fourth or early third century BC, the archaeology of the area around the cult place indicates the presence of a fairly complete, though spatially differentiated, non-urban community. Conspicuous elements are the burial area and the nucleated settlement which are located close to each other and to the cult place.

The period of monumentalisation of the cult place in the late second century BC was preceded by a significant expansion of dispersed rural settlement over the area.

The site density recorded in our survey is considerably higher than those mapped by other survey projects in the region, such as in Barker's survey of the middle and upper Biferno Valley. To an extent this is likely to be the result of the different and more intensive sampling strategy and GIS corrections.<sup>10</sup> On the other hand, there is good reason to assume that there is a correlation between higher site densities and the presence of cult places. For example, a clear concentration of sites is also recognised in the Biferno Valley dataset in the area around the cult place of Colle Sparanise (Barker, 1995 site C36). Although the sites around Colle Sparanise are not dated precisely enough to distinguish a chronological development such as we traced at S. Giovanni in Galdo, it appears that site densities in this area are only slightly lower than ours. Similar correlations between higher site densities and the presence of this type of cult places may be expected in other areas in the region too (e.g. around the sanctuary of Cupa, Gildone (Stek and Pelgrom, 2005), and at S. Vincenzo al Volturno (Bowes, Francis and Hodges, 2006)) - although the issue certainly requires more detailed field research in the future.

In conclusion, the sanctuary of S. Giovanni in Galdo, Colle Rimontato appears to have served a local community, and it may be suspected that S. Giovanni is not an exception. Such a firm local embedding of a rural cult place does not, of course, exclude *a priori* other roles, for instance as road shrines along transhumance routes or as territorial markers. However, especially in the light of the chronological development we noticed - important phases of the cult place follow soon *after* key transformations in the settlement pattern, rather than the other way around - our study at the least suggests that such roles were neither its original nor necessarily its principal functions. Of course, a connection to transhumance cannot be excluded, but the sanctuary finds of S. Giovanni in Galdo do not offer any positive evidence in this respect either: the mostly regionally produced ceramics do not differ from the finds in the domestic and burial sites identified in the survey. There were no special imports, and evidence for artisanal production was only found in the village site. The same goes for the interpretation of sanctuaries as territorial marker; such a function cannot be dismissed on the basis of our dataset - but our findings may nevertheless weaken its probability. Such a territorial conception of rural cult places is ultimately derived from societal contexts which are emphatically different from the Central Italian situation, namely from urban societies in early Greece and Magna Graecia with territories that were supposedly more clearly defined (and even here discussion is possible). We believe that such a model and its related perception of territoriality are not necessarily attractive for interpreting non-urban Samnite society (Stek, 2009, Chapter 4).

Crucially, it should be remembered that the very idea of the connection of rural sanctuaries with transhumance, tribal borders or state intervention in general has been prompted in the first place by a perceived need to explain the presence of isolated temples in an otherwise empty landscape. As this study demonstrates, this presumption of isolation can be challenged. An interpretation of Samnite sanctuaries as socio-religious centres for local communities, placed at the centre, rather than at the fringes of society is therefore more attractive in this light. It is in the context of a thriving community that the genesis, and much later the monumentalisation, of the sanctuary of S. Giovanni in Galdo has to be understood.

<sup>10</sup> See e.g. Terrenato, 1996 and Van Leusen, 2002 for comparative studies of survey methods in Italy; in general on the reconstruction of population trends with field survey methods, cf. e.g. Sbonias and Bintliff, 1999.

The question regarding who was responsible for the monumental rebuilding of the sanctuary in the late second century BC, and if it was indeed related to a more central or even state coordination, we cannot answer without better epigraphical evidence. The evidence as it is consists mainly of stamped tiles that have been found in some other sanctuaries and which mention magistrates in Oscan called *meddikes*. Some scholars have interpreted these magistrates as the supreme leaders of a Samnite political organization (La Regina, 1989). Along with the analogous architecture of some cult places, they would interpret it as evidence for the existence of a proper Samnite state that controlled these sanctuaries. However, the tile stamps may as well refer to local magistrates (Letta, 1994). A scenario in which locally governed communities, or their leading elites, decide to tap into a broader Samnite cultural discourse signaled by monumental cult places during the 2<sup>nd</sup> century BC is therefore, on the strength of our present evidence, just as feasible. But whoever the initiators of the monumental project were: they clearly capitalized on the central role the sanctuary had fulfilled since centuries for the local community of villagers and farmers reflected in the survey data.

### Acknowledgements

The field survey project has been made possible by the kind collaboration of the *Soprintendenza per i Beni Archeologici del Molise*, who actively supported the project, especially dott.ssa Stefania Capini, dott. Mario Pagano and dott.ssa Alfonsina Russo, as well as dott.ssa Valeria Ceglia and dott.ssa Cristiana Terzani. Above all, we are very grateful to dott.ssa Angela di Niro, responsible for the excavations of the sanctuary and our principal contact person at the *Soprintendenza*, for her continuous support and assistance. The fieldwork has been financed by the Netherlands Organisation for Scientific Research (NWO), the archaeological department of the University of Amsterdam (Prof. Joost Crouwel, Prof. Marijke Gnade and Prof. Vladimir Stissi), the ancient history department of Leiden University (Prof. Luuk De Ligt). Important assistance has been given by the VU University Amsterdam (Prof. Douwe Yntema), Radboud University Nijmegen (Prof. Eric Moormann) as well as the Royal Netherlands Institute in Rome (Dr Nathalie de Haan and Dr Gert-Jan Burgers). Additional financial support has been offered by the *Stichting Philologisch Studiefonds Utrecht* and Mrs. A.M. Kalmeijer (Rijswijk). Our fieldwork could not have been done without the support of the *Comune* of S. Giovanni in Galdo, and we are greatly indebted to the mayor, Mr Eugenio Fiorilli, for providing housing for our research groups on several occasions. We are also very grateful to the families Fratino, Luciani, Roccia and D'Amico for their help in practical issues. We have benefited greatly from the extensive knowledge of Samnite archaeology of Prof. Gianfranco de Benedittis, Prof. Emmanuele Curti, Prof. Adriano La Regina, Prof. Paolo Mauriello, Prof. Alessandro Naso, Prof. Massimo Osanna, Prof. Maria-José Strazzulla, Prof. Gianluca Tagliamonte, which they have kindly shared with us, as well as from the library of the Istituto Regionale per gli Studi del Molise at Campobasso. Ellen Thiermann's work especially on the ceramics and Jitte Waagen's work on the GIS have been seminal. The maps in this article have been also produced by Jitte Waagen. Our research has benefited greatly from the extensive knowledge of the archaeology of the region of Michele Roccia, who co-organized the first survey campaign in 2004. We would like to thank our courageous team members, who, even under Spartan working conditions and the extreme Molisan meteorology, have done a great job: Antonio Bruscella, Vanessa D'Orazio, Sandra Fatica, Miko Flohr, Michele Fratino, Marie-Catherine Houkes, Rogier Kalkers, Karel-Jan Kerckhaert, Francesca Laera, Debora Lagatta, Antonella Lepone, Muriel Louwaard, Antje van Oosten, Bruno Sardella, Laura Stek, Barbara Valiante, Jolande Vos, Heleen de Vries, and the team-leaders Martijn Kalkwarf, Jeroen Weterings and Neelson Witte. A special thanks goes to Jaap Fokkema and René Reijnen for their work on the drawings of the finds.

## Appendix I

### Digital modeling and data processing (JW)<sup>11</sup>

The digital landscape built for this project consists of two elements: an elevation model, which can be used to establish the morphology and hydrology of the area, and the grid of sampling units which are linked to our database with archaeological and other field observations.<sup>12</sup> Combining this data spatially allows us to correct our data for visibility and other biasing factors such as erosion processes.

In Figs. 10 and 11, for example, different ways of visualizing our combined data are presented, which among other things adds valuable information on site halos. Fig. 10 presents a visualization of the visibility per unit (dark: low, light: high) with the uncorrected numbers of retrieved finds (circles). In contrast, fig. 11 presents a correction of find numbers for visibility according to the following formula: Corrected number of shards = recorded number of shards \* ((100 / % coverage)/(visibility \* 0,2)).

These maps show that the dispersion of finds probably belonging to a site was often wider than is noticeable in the field. Moreover, the correction of find numbers for visibility has allowed us to establish the possible continuation of site halos in units with relatively low visibility. For the present study, however, we have preferred a conservative approach in defining site halos, basing ourselves on the uncorrected find density maps combined with field observations.

Another possible bias can be analysed using GIS regards erosion processes. The mountainous character of the research area, with pronounced differences in elevation and steepness, can be expected to have influenced the surface record.<sup>13</sup> A digital elevation and hydrological model of the landscape has been created to analyse this potential bias.<sup>14</sup> Fig. 12 shows an example of the digital elevation model combined with the information from the regional erosion maps, in which the arrows indicate the likely direction of artefact displacement for each unit.<sup>15</sup>

An analysis of these biasing factors also helps us to understand off-site finds. Especially in dynamic mountainous landscapes, low-density areas do not necessarily reflect the absence of archaeological material in the subsoil. Therefore, we developed a set of GIS analyses to distinguish potential sites which were not identified during survey in the field. This analysis shows that areas with low find densities with a relatively high diversity of ceramic categories, comparable to the spectrum encountered in identified sites, are particularly indicative of potential sites. On the basis of the GIS analysis, we made some revisits in 2008 under different conditions of visibility.<sup>16</sup> In three out of five cases, the revisits identified sites which were not visible during the previous surveys. The study of this topic is still in progress.

## Appendix II: The geophysical survey (KJK)

Six sites recognized in our regular field survey were selected for geophysical prospection. We selected sites of different categories and periods ranging from small hut structures to a large Roman villa. Two different techniques were used, magnetometry and electrical resistance. Magnetometric prospection was carried out in and around G9 (the cult place), G7 (a Roman villa) and G4 (a Hellenistic farm) using a Fluxgate FM 36 gradiometer. Apart from

<sup>11</sup> A more detailed description and additional analyses will be presented in a forthcoming study by J. Waagen.

<sup>12</sup> The modern topography has been derived from the digitized *Carta Tecnica Regionale* (1:5.000), kindly provided by the geographical service in Campobasso.

<sup>13</sup> Mean steepness of slope in the research area is 11.4°.

<sup>14</sup> The landscape model is based on the five metre and one metre contour isolines and point heights of the *Carta Tecnica Regionale* maps. The DEM consists of 10 x 10 m cells.

<sup>15</sup> Our present model does not take account of vegetation, precipitation, soil type etc.

<sup>16</sup> These revisits were directed by J. Waagen. For the new sites discovered see site catalogue numbers G28, G29, G30.

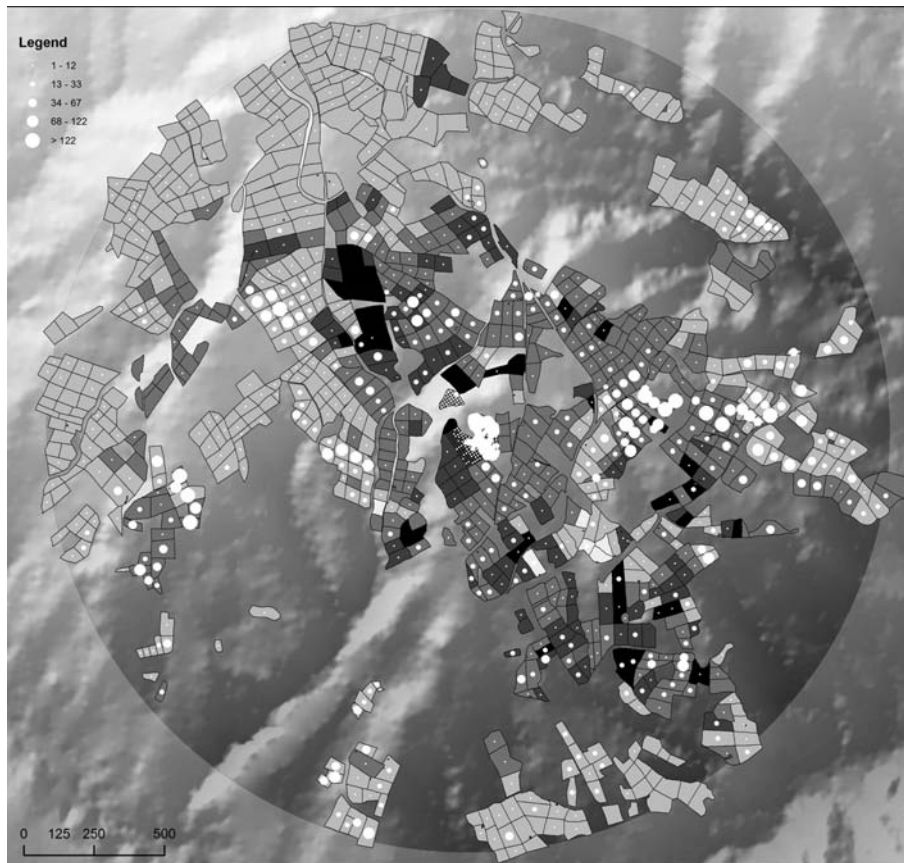


Fig. 10. Uncorrected number of collected shards (circles) on the visibility map (dark: low, light: high).

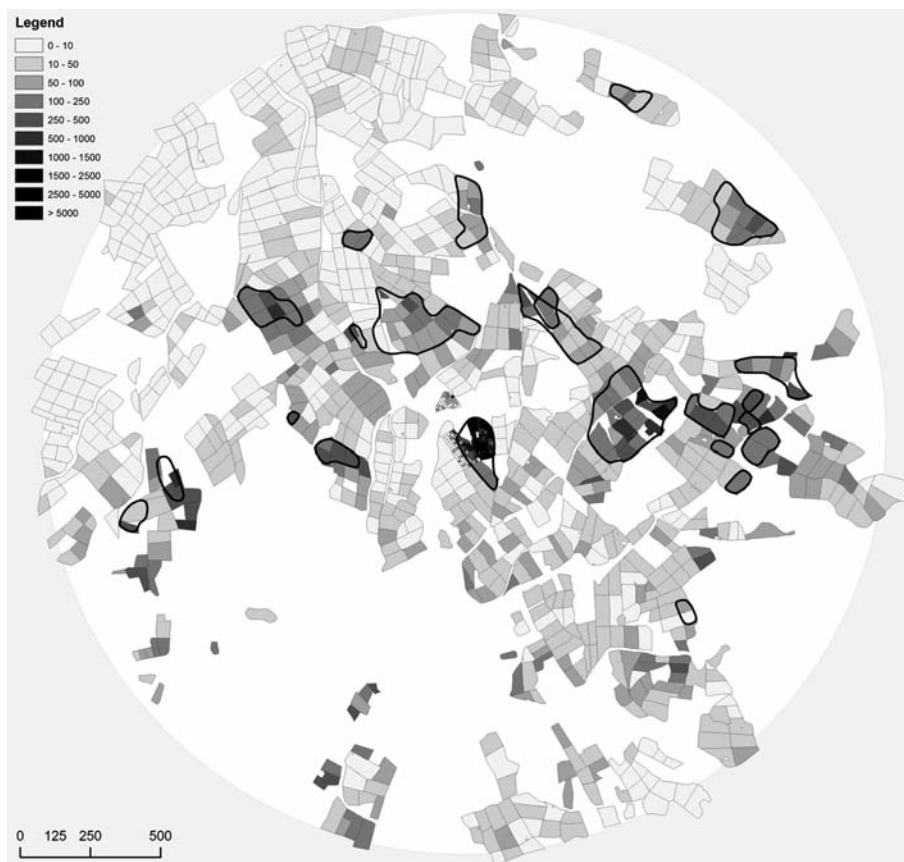


Fig. 11. Corrected number of collected shards with site halos.

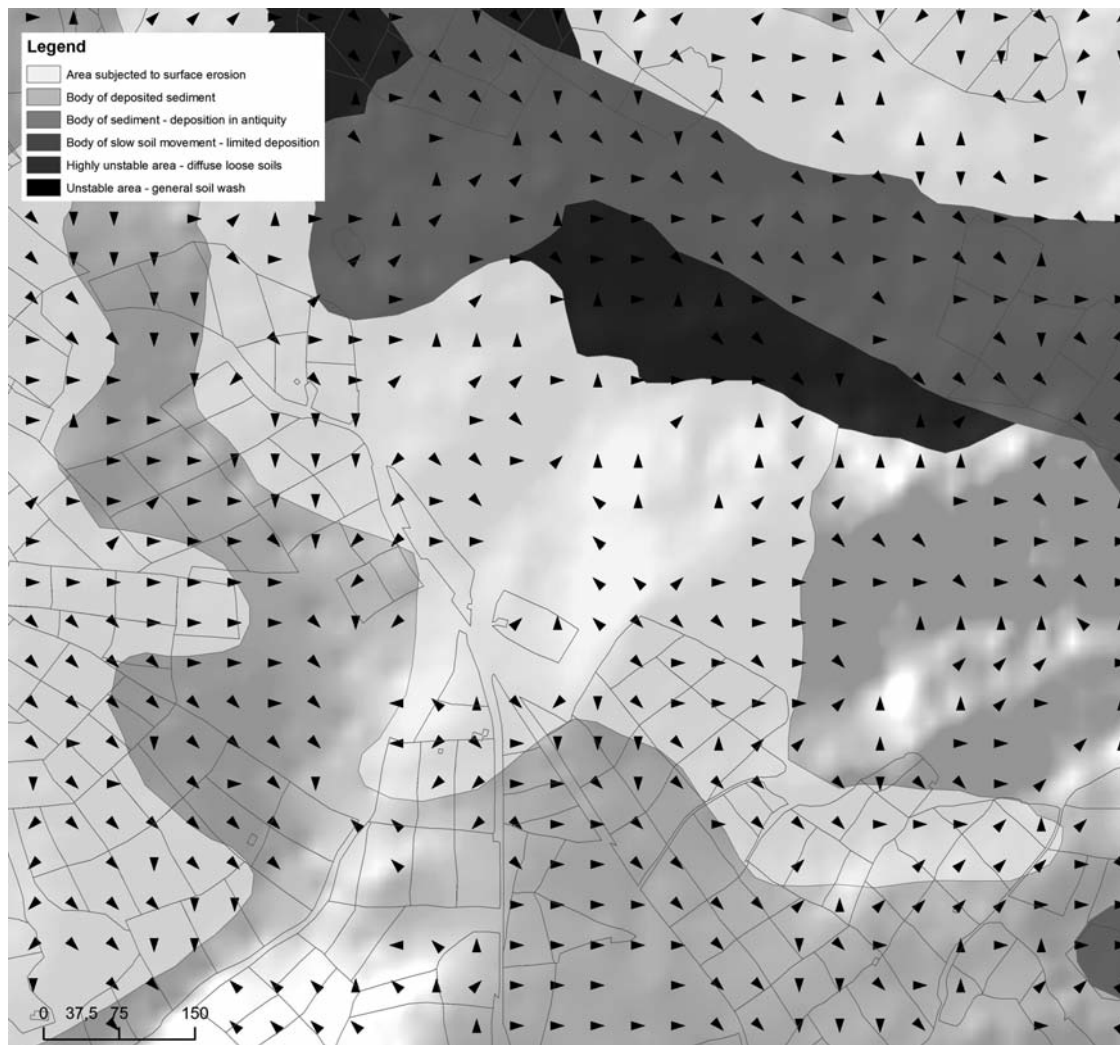


Fig. 12. elevation model combined with the information from the regional erosion maps. Arrows indicate the likely direction of artefact displacement for each unit.

the recognition of a large rectilinear feature in G7, the results were disappointing (fig. 13, compare also with fig. 8 which shows the results of the results of the electric prospection carried out at G4), especially in direct comparison with the results obtained with electric resistivity prospection.

The magnetometric prospection data will not be gone into more detail here (see Kerckhaert 2005). A total of four sites (G2, G3, G4, G21) was investigated for electric resistivity, which yielded much better results and will be presented here (see fig. 14 for their location). A total of 47 grids measuring 20 x 20 m was examined using a RM 15 resistivity device. The collected data was processed using Archaeosurveyor.

#### Site G2

At the northern part of the village site c. 800 sq. m in total (2 grids) was investigated (fig. 15). The two linear features recognized in the most northerly grid probably reflect the corner of a rectangular structure, the bulk of which now lies beneath a small grove. However, in the southern grid three round features with a diameter of circa 3 m positioned in one straight line were revealed. The interpretation of these features is puzzling. One of the possibilities is that they reflect ovens, especially since some kiln refuse was found in the area (see Catalogue site G2).



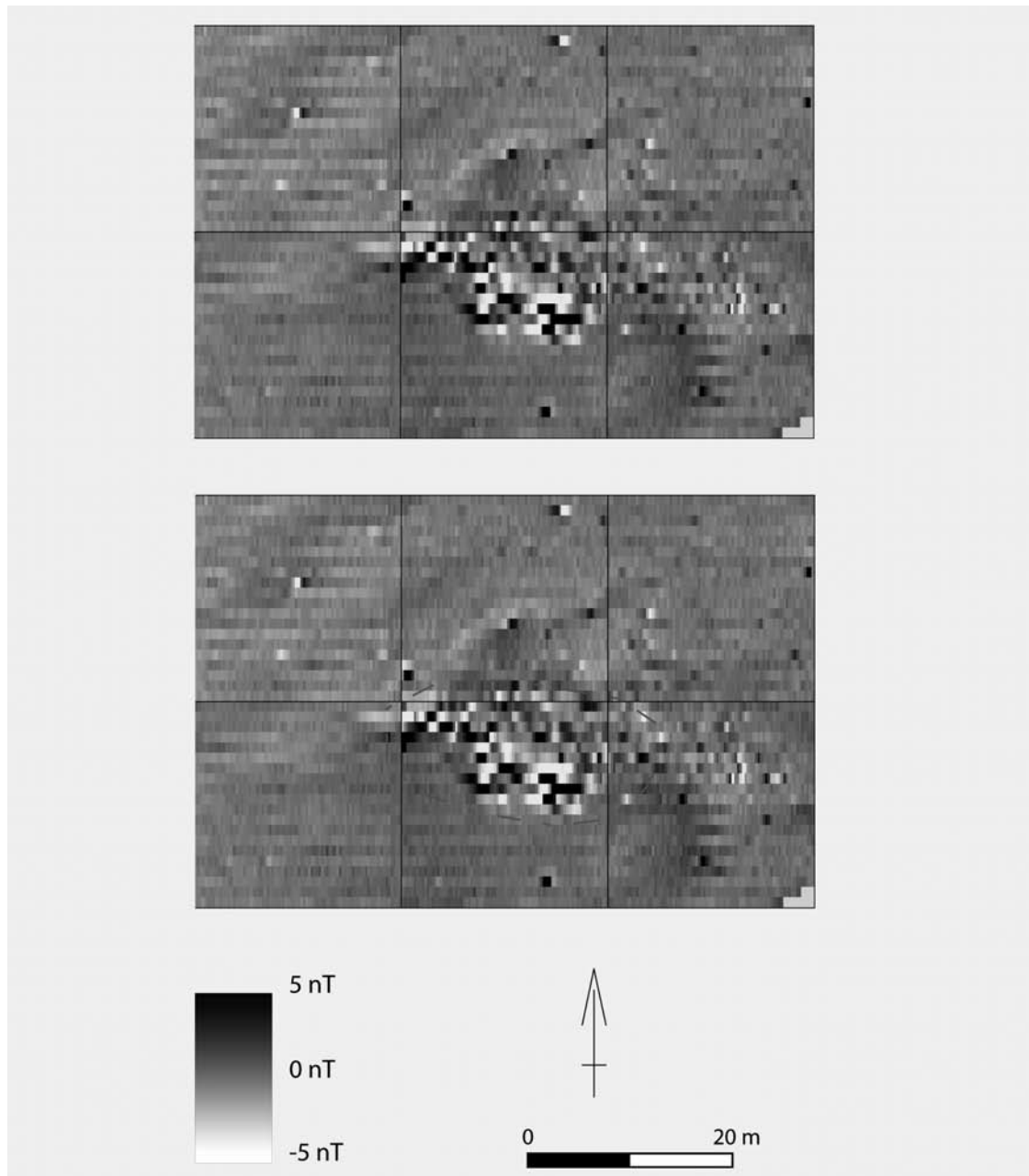


Fig. 13. Magnetometric prospection carried out at G4

#### Site G3

Farther downhill, in the eastern part of the village site, a total of 15000 sq. m (38 grids) was covered (fig. 16). Two zones of high resistance were identified, which were separated by a central zone of low resistance. We assume that the zone of low resistance is caused by erosion. The linear feature follows the orientation of the above lying, open cultivated strip of land which cuts through the woodlands. An accumulation of ceramics has also been found at the bottom of the low resistance area. In the south-western grids we measured two areas of very high resistivity with a rectangular shape of almost the same size (10 x 20 m). At these locations large quantities of ceramics dating to the Hellenistic and Roman periods as well as building materials were recognized during regular field survey. Therefore, the features are probably best interpreted as belonging to domestic structures. Farther to the north, we

Fig. 14. Overview of sites investigated for electric resistivity

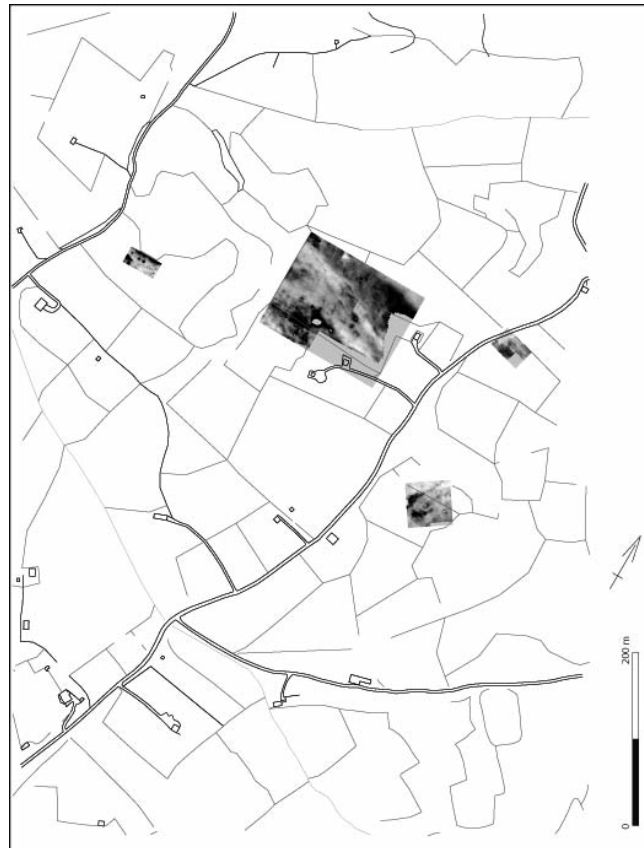
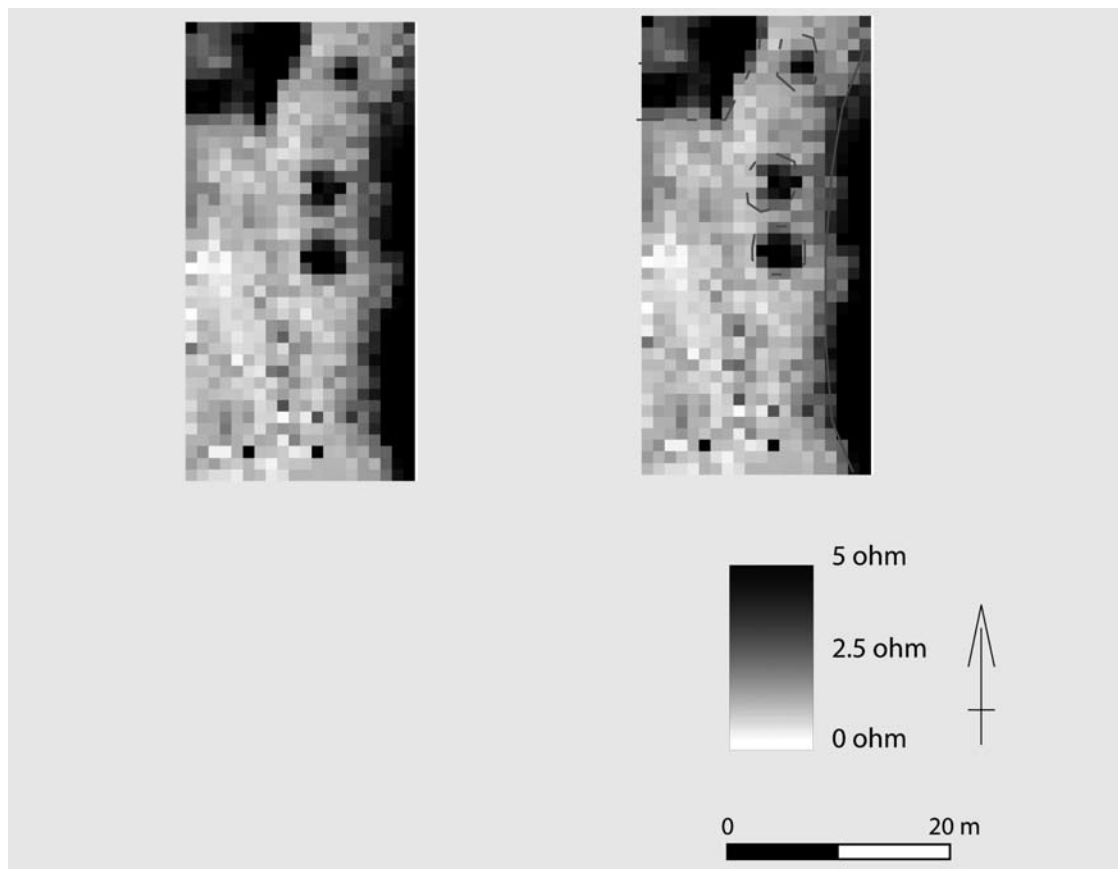


Fig. 15. Results of geophysical prospection carried out at site G2



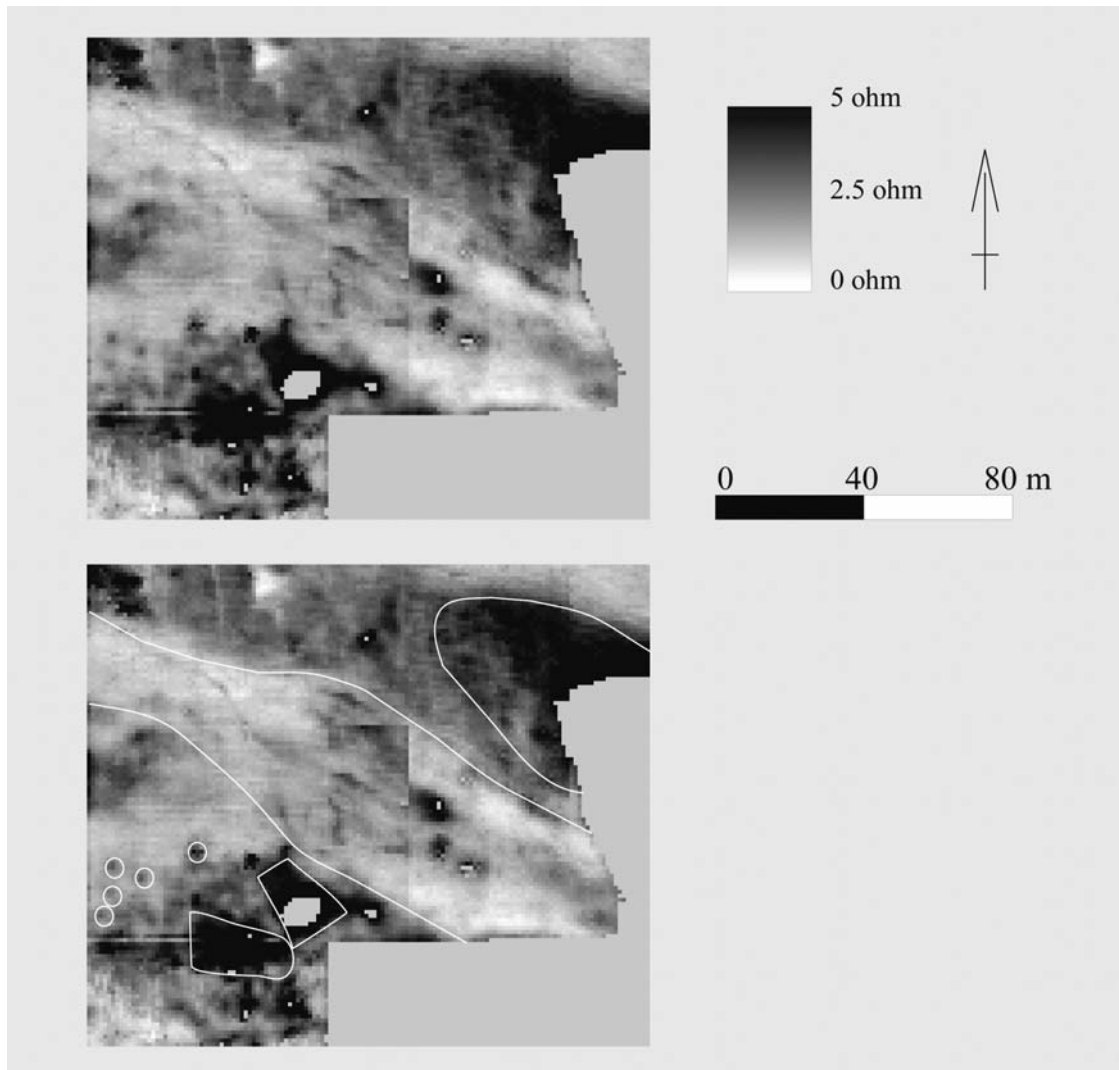


Fig. 16. Results of geophysical prospection carried out at site G3

found a few small peaks (c. 1 x 1 m)<sup>17</sup> in the resistivity data. The curvilinear alignment, together with the impasto ceramics which have been found there, could suggest that they reflect post holes. In the data from the north-eastern high resistivity zone no clear features are distinguishable.

#### Site G4

At site G4, interpreted as a Hellenistic farm, an area of 1600 sq. m (4 grids) has been investigated (see fig. 8). In the resistance data, a quasi-rectangular feature is visible. Less clear are two positive linear anomalies aligned with this feature. The dimensions of this feature are similar to the ground plan of the excavated farmstead at Cercemaggiore ((Di Niro and Petrone 1993), cf. above).

#### Site G21

In site G21, interpreted as special purpose site of the pre/proto-historic period 1600 sq. m (4 grids) were investigated (fig. 17). Two WE orientated lines of high resistivity are visible, which are interrupted halfway.

<sup>17</sup> Probably even smaller; this is the maximum resolution.

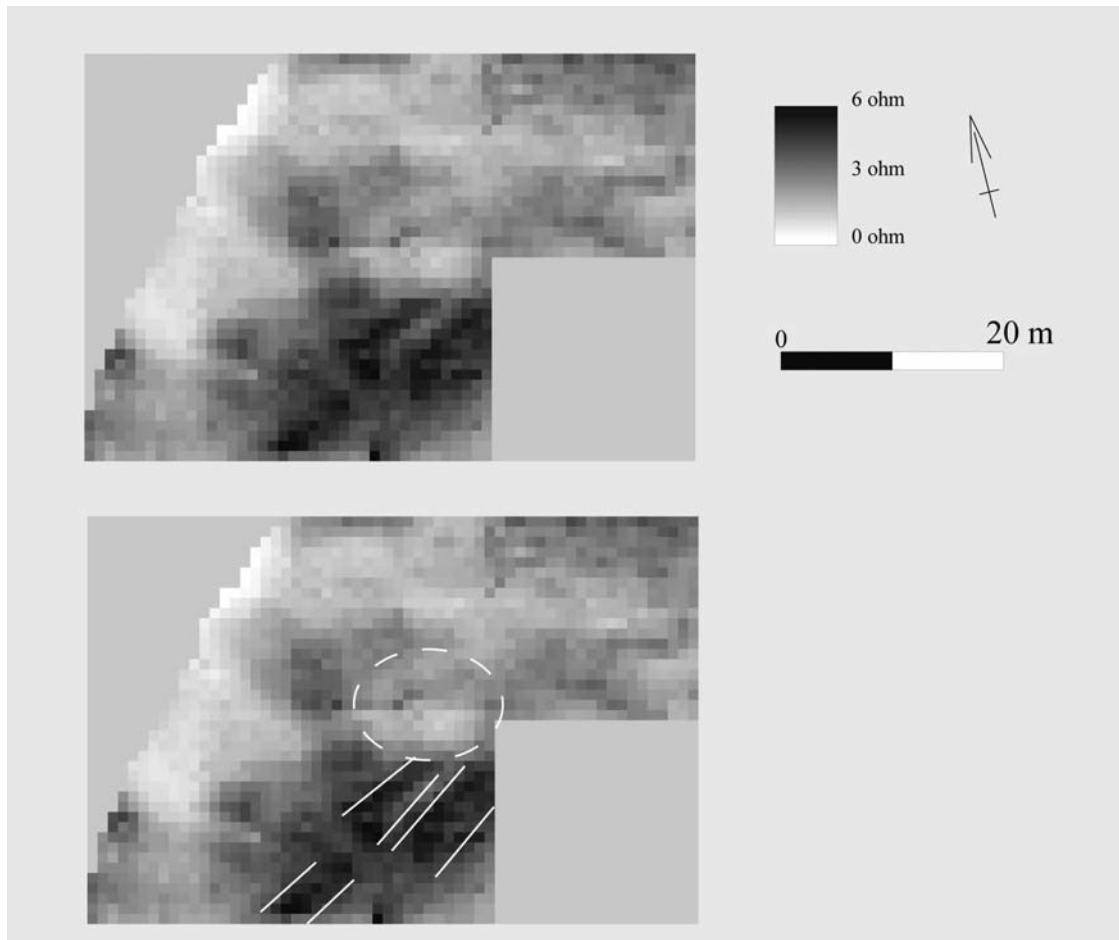


Fig. 17. Results of geophysical prospection carried out at site G21.

### Appendix III: site catalogue

#### LEGENDA

This catalogue presents the details of the sites and associated finds recognized during the survey in synthetic form.<sup>18</sup> It follows the format as below:

**Site** [sitenummer] [walked units corresponding to the base map]

**Location:** [toponym]; [co-ordinates]; [altitude in metres]; [slope of the terrain].

**Sampling:** [description of sample strategy: which visit, etc. e.g. T-10 m = Transect sample with 10 m distance between surveyors; D-2 m = Diagnostic sample with 2 m distance between surveyors; G = Grab sample; D-r = Diagnostic random sample]

**Land use/ tillage/visibility:** [visibility from 1 (low) to 5 (high)]

**Size/density/quality:** [size of the halo]; [size of the nucleus]; [density of halo]; [density of high density area/nucleus]; [general impression of the conservation of the finds (indicative of period of exposure of site)]

**Categories:** [We classified all collected shards into broad typological groups (cf. below for used classes and abbreviations). Here all recognized find categories and the respective numbers of finds are listed, including the shards selected for illustration (cf. below, Drawing selection)]

<sup>18</sup> We decided not to describe the off-site find in detail. For general quantities of all ceramics collected see fig 10.

**Functional interpretation:** [sic!]

**Chronology:** [see codes below]

**Remarks:** [sic!]

### Drawing selection

A representative sample of shards has been illustrated for each site (scale 1:3). For parallels, first and foremost we have tried to refer to publications of stratigraphical contexts from the region. Since as yet no good regional studies are available for several phases and types, we also used more general reference works (see Roccia 2005). For dating, we used broad periods (e.g. Archaic, Hellenistic, Roman etc.); when the diagnostics allowed a more refined chronology is proposed (H1, H2 etc.; cf. below for periodization and abbreviations).

Characteristics are listed in the following order: [type] – [fragment preserved]-[colour]-[thickness in cm]-[chronology and parallel, if applicable].

### Typology

Arch	Architectural terracotta	MS	Mill stone
ARS	African red slip	OC	Opus craticium
AU	Amphora unidentified	PRW	Pompeian-red ware
BG	Black gloss wares	PS	Roman thin-walled wares
CC	Coarse cooking wares	PW	Plain wares
CP	Coccio pesto	STR	Stralucido
CW	Coarse ware	SV	Slipped vessels
DO	Dolium	STV	Storage vessels
GL	Glazed	TERfig	Terracotta figurine
GML	Green monochrome lead glaze	TIL	Roof tiles
IMP	Impasto wares	TT	Testum
ITS	Italic terra sigillata	UN	Unidentified pottery
LW	Pyramidal loom weight	WAS	Kiln refuse

### Colour/ Fabric

(adapted from Rainini 1996)

#### IMPASTO

- A Brown and fine core, surface brown and burnished.
- B Brown rather fine core, rather rough surface, colour chestnut, (reddish-brown).
- C Granular core of brown/reddish (chestnut) colour, with rough reddish-brown (chestnut) surface.
- D Brown/chestnut core, very rough, with rough brown surface.
- E Granular brown/reddish/red core, with rather smooth surface in reddish-brown (chestnut).
- F Rough brown core with rough brown/reddish surface.
- G Rough brown core, with rough red surface.
- H Very rough core and surface, both reddish.

#### COARSE/ FINE WARES

- a Weak/light pink, purified and compact.
- a1 As above, but bright pink colour.
- a2 As above, but less compact and less purified.
- b Orange, highly purified and fine.
- b1 As above, but granulated en variable purification.
- c Reddish, granulated and rather well purified.
- c1 As above, but many inclusions.
- d Beige, very compact and highly purified.
- d1 As above, but less consistent and less purified.
- e Sand colour, consistent, generally few inclusions.

- e1 As above, but more grayish, most commonly because of failure in firing. Rather many inclusions.
- f Smoky grey colour, very hard, highly purified.
- f1 Colour dark grey, rather hard and many inclusions.
- g Brown, compact and rather well purified.
- g1 As above, but more chestnut reddish-brown, rougher, and far less purified.
- h Sandwich-ware, grey core with pink or red/reddish surface. Rather hard and purified, but some fine sandy inclusions.
- h1 As above, but very rough and larger inclusions.

### Chronology

PP= pre and proto historic period (Bronze Age to Archaic period)

PP1= Bronze Age

PP2= Iron Age

PP3= Archaic/ Classical

H= Hellenistic period

H1= 350-200

H2= 200-50

R= Roman period

R1= 50 BC- AD 80

R2= 80-300

R3= 300-500

M= Medieval

SR= Sub-Recent

### CATALOGUE:

#### Site G1 (units 43-45)

Location: Colle Cifello; 480394E, 4604579N; alt. 575 m.; slightly sloping (5.8°).

Sampling: 1<sup>st</sup> visit: T-10 m.; 2<sup>nd</sup> visit: D-2 m.

Land use/ tillage/visibility: Arable/ finely ploughed/ 4.

Size/density/quality: halo: 0.4 ha, nucleus 0.01 ha/ halo: 0.5 per m<sup>2</sup>, high density area/ nucleus: 5-10 per m<sup>2</sup>/ Tiles good, diagnostics worn.

Categories: Basin-1; BG-1; CW-12; DO-3; GL-2; MS-1; PW-10; TIL-33.

Functional interpretation: Farm.

#### Chronology:

H, probably H2: the black gloss shard and CW and PW attest H occupation. Both the typology of the ceramics and the absence of impasto suggest a H2 rather than a H1 date.

R: fabric and form of part of the CW suggests a Roman chronology.

#### Remarks

Nearby is an ancient well.

#### Drawing selection

1. CW, rim, a1, 0.6
2. CW, base, h1, 1.0
3. CW, knob, g, 1.2
4. CW, handle, d, 0.9

5. CW, base, h1, 0.8

6. DO, rim, h1, 2.4

7. DO, rim, h1, 2.0

8-11. TIL

#### Site G2 (units 174-203)

Location: Ingiuno; 480237E, 4605350N, alt. 649 m.; sloping (6.9°).

Sampling: T-10 m.

Land use/ tillage/visibility: Arable/ finely ploughed/ 1-4.

Size/density/quality: halo: 6.2 ha, nucleus 1: 0.12 ha, 2: 0.05 ha, 3: 0.05 ha, nucleus 4: undefined/ halo: varying between 0.05 and 1.4 per m<sup>2</sup>, high density areas/ nuclei 5-15+ per m<sup>2</sup>/ varying.

Categories: Arch-1; ARS-6; AU-2; Bacino-1; BG-27; CP-1; CW-513; DO-22; GL-7; IMP-50; LW-4; OC-2; PS-1; PW-170; STR-2; TIL-445; WAS-21; UN-622.

Interpretation: Nucleated settlement; probably to be connected with G3 and G20. The kiln refuse identified in Nucleus 4 and the three possible ovens detected by the resistivity prospection could indicate production at the site.

#### Chronology

H1: attested to with BG forms nos. 4, 5, 8-10. The identified impasto shards (mostly worn) probably also belong to this phase.

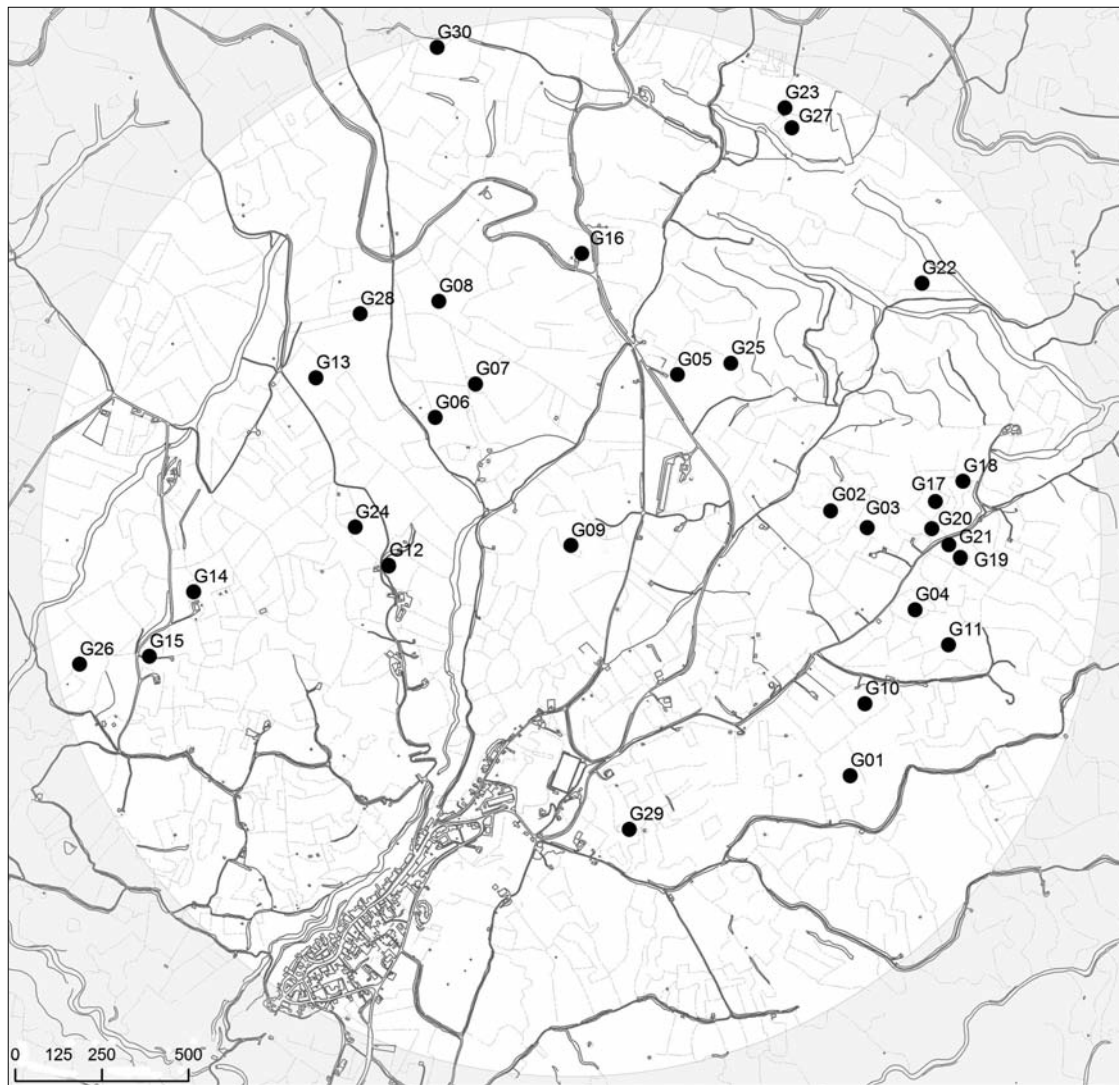


Fig. 18. Overview of all sites recognised in the survey.

nos. 45 and 46 have parallels in Fonte del Romito Phase II (Rainini 1996, 160 nos. 422-423); a PP date however, cannot be ruled out. H2: attested with BG plates 2-3; 6-7 which have good parallels in 'la casa di LN' of Monte Vairano.

R1: no clear diagnostics, but PS and various thin CWs (e.g. nos. 20-22; 40-43, 48) which are also characteristic of Fonte del Romito Phase IV (Rainini 1996, 277, nos. 754-758; 284-286, nos. 791-796) make continuity in this period probable.

R2: attested to by Hayes 8a (Hayes 1972, 1980, not drawn). Various CW (e.g. no. 36) also fit this chronological horizon (cf. Barker 1995, 13 no. 212, Matrice mid-Imperial period).

R3: Hayes 61 A (no. 1); STR and various CWs (e.g. nos. 34, 45) which have parallels

in the San Giacomo late Roman villa (Albarella, Ceglia, and Roberts 1993, 186, no. 81c; 190 no. 99), attest to occupation in this period.

#### Remarks

While the H material is scattered all over the site the R and LR material is mostly concentrated in Units 192-196. Resistivity prospection was carried out, for results see main text. For parallels in the region see the so-called *vicus* of San Martino nearby the sanctuary of Campochiaro (Campochiaro 1982, 10-11); Fonte del Romito (Rainini 1996); Colle Sparanise (Barker 1995, 191); San Vincenzo (Bowes, Francis and Hodges 2006; Hodges and Mitchell 1985, 5-6) and Macchiagodena (Pagano and Raddi 2004).

**Drawing selection**

1. ARS, rim, c, 0.4, R3 (Hayes 61A)
2. BG, base, d, -, H2 (cf. (De Benedittis 1988), 70 no. 11 and 72 No. 15; Morel 2258; Morel 145a1)
3. BG, base, d, 1.0, H2 (cf. (De Benedittis 1988), 66 nos. 3 and 4; Morel 2255; Morel 162 a1)
4. BG, wall, d, 0.4, H1 (cf. Morel 2586)
5. BG, base, d, -, prob. H1 (cf. Morel 331a3)
6. BG, rim, a-d, 0.5, H2 (De Benedittis 1988), 68 nos. 3 and 6; (Rainini 1996), 215 no. 550; Morel 2255; 2234)
7. BG, base, a-d, 1.0, red paint inside, H2 (stamp cf. (Bowes, Francis, and Hodges 2006), 112 no. 10, form: (De Benedittis 1988), 71 no. 14; Morel 2258; 2286)
8. BG, wall, d, 0.4, H1 (cf. Morel 2435)
9. BG, base, d, 0.5, H1 (cf. (Capini 1984), No. 1; Morel 7112a1)
10. BG, rim, d, 0.4, H1 (cf. (Rainini 1996), 115 no. 197; Morel 2784)
11. CW, base, f-g1, 0.8
12. CW, lid, b-f1
13. CW, rim, b, 1.0
14. CW, handle, h, 2.0
15. CW, base, b, 0.7
16. CW, base, h1, 1.5
17. CW, base, h, 1.2
18. CW, base, a-c, 2.1
19. CW, rim, g1, 0.3
20. CW, base, a, 0.8,
21. CW, base, h, 0.6
22. CW, base, b, 0.3
23. CW, base, b1, 0.6
24. CW, rim, h1, 0.8
25. CW, handle, h1, 1.1
26. CW, rim, h, 0.4
27. CW, base, b1, 0.4
28. CW, rim, h, 0.4
29. CW, rim, h, 0.4
30. CW, rim, g, 0.4
31. CW, rim, g, 0.5,
32. CW, rim, b, 0.6
33. CW, rim, h, -,
34. CW, rim, c, 0.4
35. CW, rim, d, -,
36. CW, handle/rim, d, 1.0,
37. CW, handle, a, 1.4
38. CW, rim, h, 1.2
39. CW, rim, b-h1, 0.5
40. CW, base, b1, 0.8
41. CW, base, f, 1.4
42. CW, base, b, 0.8
43. CW, base, b, 1.0
44. CW, base, h, -,

45. CW, rim, b, 0.4
46. IMP, rim, B,C-H, 0.8
47. IMP, rim, A-H, 0.7
48. PS, base, h, 0.2
49. PW, rim, d, 0.6
- 50-55. TIL

**Site G3 (units 242-246)**

Location: Ingiuno; 480493E, 4605251N, alt. 603 m.; sloping (10.3°).

Sampling: 1<sup>st</sup> visit: T-10 m.; 2<sup>nd</sup> visit: G; 3<sup>rd</sup> visit: G; 4<sup>th</sup> visit: D-r.

Land use/ tillage/visibility: Arable; finely ploughed; 3.

Size/density/quality: halo: 1.4 ha, nucleus 1: 0.05 ha, 2: 0.08 ha 3: 0.08 ha/ halo: 0.2 per m<sup>2</sup>, nuclei/ high density areas: 5-15+ per m<sup>2</sup>/ varying.

Categories: ARS-2; AU-1; BG-11; CC-2; CW-94; DO-8; GL-1; IMP-89; IS-1; ITS-1; LW-1; MS-1; OC-4; PS-4; PW-21; TIL-100; TT-2; UN-122.

Interpretation: nucleated settlement (probably to be connected with G2 and G20).

**Chronology**

PP: The assemblage of impasto forms corresponds closely with PP2 phases of Fonte del Romito phase I (Rainini 1996, 56-63) and Ponte Ronaco (Talamo 1987). Continuity in PP3 phase is probable.

H1: attested with BG nos. 3, 6 and 7, which have parallels in Campochiaro Scarico A. PW no. 44 has a parallel in Fonte del Romito Phase II (Rainini 1996, 164, no. 445).

H2: is probable. Some of the CW could well date to this period (e.g. no. 22 has parallels in Fonte del Romito Phase III, cf. Rainini 1996, 222, nos. 585 and 267, no. 706).

R1: ITS shard and PS attest to R1 occupation.

R2: attested to by ARS Hayes 8b (nos. 1-2).

Remarks: Resistivity prospection was carried out, for results see main text and Appendix II. See also remarks site G2.

**Drawing selection**

1. ARS, base, c, 0.4 R2 (Hayes 8)
2. ARS, rim, c, -, R2 (Hayes 8b)
3. BG, rim, d, 0.5, H1 (cf. *Campochiaro* 1982, 35 no. 33; Capini 1984, 22 no. 36; cf. also Fonte del Romito phase II, Rainini 1996, 125 no. 246; cf. Morel 2910 / 2974a.
4. BG, wall, d, 0.4, H
5. BG, base, d, 0.8, H
6. BG, rim, d, 0.7, H1 (*Campochiaro* 1982,



- 35 no. 30; Capini 1984, 20 no. 25; cf. Morel 2420-2423)  
 7. BG, rim, d, 0.3, H1 (Capini 1984, 20 nos. 25 and 74)  
 8. BG, rim, d, 0.3 H, particular form.  
 9. CW, lid, g1, 1.2  
 10. CW, rim, b, 0.3  
 11. CW, lid, e, 0.5  
 12. CW, base, e1, -,  
 13. CW, rim, h, 0.5  
 14. CW, handle, h1, 1.0  
 15. CW, rim, h, 0.5  
 16. CW, rim, g, 0.5  
 17. CW, lid, b1, 0.8  
 18. CW, rim, b1, 0.5  
 19. CW, base, g1,-  
 20. CW, rim, e1, 0.4  
 21. CW, rim, g1, 0.6  
 22. CW, rim, b1, 0.5  
 23. CW, rim, b1, 0.6  
 24. CW, base, b, 0.6  
 25. CW, base, h, 1.2  
 26. CW, base, b1, 1.0  
 27. DO, rim, -, 2.5  
 28. IMP, rim, K, 1.0  
 29. IMP, rim, F, 1.8  
 30. IMP, handle, G.  
 31. IMP, rim, B, 0.6  
 32. IMP, rim, K, 0.7  
 33. IMP, handle, B, 1.6  
 34. IMP, base, B, 1.3  
 35. IMP, handle & rim, K, 0.6  
 36. IMP, base, A, 0.4  
 37. IMP, rim, K, 0.6  
 38. IMP, handle, L, 1.8  
 39. IMP, base, I, 1.2  
 40. IMP, handle, A, 1.1  
 41. LW, g  
 42. PW, rim, d, 0.5  
 43. PW, handle, d, 1.5  
 44. PW, rim, d, 0.5  
 45-46. TIL

#### **Site G4 (unit 258)**

**Location:** Sorgente Coverchiata, 480578E, 4605050N, alt. 592 m.; sloping (8,9°).

**Sampling:** 1<sup>st</sup> visit: T-10 m.; 2<sup>nd</sup> visit: D-2 m.; 3<sup>rd</sup> visit: D-2 m.

**Land use/ tillage/visibility:** Arable/ finely ploughed/ 3.

**Size/density/quality:** 0.44 ha, nucleus 0.02 ha/ halo 0.1, nucleus 5-10 per m<sup>2</sup>/ good.

**Categories:** BG-5; CW-6; IMP-3; PW-3; TIL-41; UN-18; WAS-1.

**Interpretation:** Farm.

**Chronology:**

H2 attested (e.g. No. 1).

**Remarks:** Two ancient wells nearby. Resistivity prospection has revealed a quasi-square feature of c. 20 x 20 m. (See also main text and Appendix II). A good excavated example of such a rural structure of similar size is Cercemaggiore (Di Niro and Petrone 1993).

#### **Drawing selection**

1. BG, base, d, 0,7, H2 (cf. De Benedittis 1988, 69 no. 10; cf. Morel 2258).
2. BG, base, d, -, H
3. CW, rim, b1, 0.4
4. CW, rim, b1, 0.3
5. CW, rim, g1, 0..
6. PW, rim, d, 0,2
7. PW, rim, d, -.
- 8-12. TIL
13. Metal object

#### **Site G5 (units 268-280)**

**Location:** Fonte Romito, 479906E, 4605714N alt. 692 m.; sloping (12.5°).

**Sampling:** T-10 m.

**Land use/ tillage/visibility:** Arable & horticulture/ arable areas finely ploughed/ 1-4.

**Size/density/quality:** 0.81 ha, nucleus 0.08 ha/ halo 0.05 to 0.2 per m<sup>2</sup>, nucleus 15+ per m<sup>2</sup>/ Tiles good, diagnostics worn.

**Categories:** BG-2; CC-7; CW-14; DO-1; IMP-13; PW-4; TIL 80; UN-11.

**Interpretation:** Farm.

**Chronology:**

H, H2 probable. One small BG *unguentarium* shard (no. 1) dates to the third-early-second century BC; the CWs have parallels in Fonte del Romito Phase III (e.g. no. 2, cf. Rainini 1996, 216 no. 557).

#### **Drawing selection**

1. BG, rim, d, 0.3, H1/2 (cf. Morel 7112a/b)
2. CW, rim, e, 0.7
3. CW, handle, h1, 0.6
4. CW, rim, e1, 0.7
5. CW, handle, h, 1.8
6. IMP, handle
- 7-9. TIL

#### **Site G6 (units 342-344)**

**Location:** Fonte Valloni, 479221E, 4605593N alt. 691 m, sloping (10.0°).

**Sampling:** 1<sup>st</sup> visit: T-10 m.; 2<sup>nd</sup> visit: D-r.

**Land use/ tillage/visibility:** Arable & fallow/ arable areas finely ploughed rest none/ 3.

**Size/density/quality:** 0.23 ha, no clear nucleus/ density: halo 0.2 per m<sup>2</sup>; high density areas: 5 per m<sup>2</sup>/ mostly worn.

Categories: ARCH-1; ARS-5; BG-3; CW-77; DO-1; GL-3; IMP-1; PS-1; PW-20; TIL-35; UN-48.

Interpretation: Farm or sub-structure belonging to the nearby villa (site G7).

Chronology:

H, H2 attested. No. 1 has a parallel in Gildone, and CWs have parallels in Fonte del Romito Phase III (e.g. no. 4, cf. Rainini 1996, 222, nos. 585 and 267 no. 706).

R1 is probable by the presence of PS.

R2 is attested to by ARS, but some of these R materials might be distortions from G7.

Remarks: ancient well nearby; small stream nearby.

#### **Drawing selection**

1. BG, wall, d, 0.2, worn, H2, (cf. Di Niro and Macchiarola 1989, 35 no. 2)
2. BG, handle, d, 0.5, H
3. BG, base, d, 0.9, H
4. CW, rim, b1, 0.4
5. CW, rim, g1, 0.4
6. CW, base, h1, 1.3
7. CW, rim, b1, 0.4
8. CW, rim, b, 0.5
9. PW, rim, d, 0.5
10. distanziatore, d, 1.9

#### **Site G7 (units 323-324,345,420,421,424)**

Location: Fonte Valloni, 479335E, 4605688N, alt. 716 m, sloping (6.6°).

Sampling: 1<sup>st</sup> visit: T-10 m.; 2<sup>nd</sup> visit: D-r.

Land use/ tillage/visibility: Arable & fallow/ arable areas finely ploughed rest none/ 1-4.

Size/density/quality: 5.3 ha, nucleus 0.29 ha/ halo 0.2-0.4 per m<sup>2</sup>, nucleus 15+ per m<sup>2</sup> (mostly tiles); good.

Categories: ARS-13; BG-3; CC-2; CP-2; CW-159; GL-1; GML-1; IMP-3; ITS-1; LW-1; MS-1; PS-2; PW-8; DO-7; SV-1; TIL-111; TT-1; UN-28.

Interpretation: Villa rustica which developed from a (smaller) Hellenistic predecessor (see main text).

Chronology:

H: BG shards indicate a H date; the low quantity of IMP suggests a H2, rather than a H1 date.

R1: attested to by ITS (no. 33).

R2: attested to by early ARS (no. 2). Several CW have good parallels in the Matrice Villa (e.g. nos. 6 and 36 cf. Barker 1995, 133, F211; 127, F161.5).

R3: ARS Hayes 61a (not drawn).

M: GL and several of the CWs are datable in this period.

Remarks: Ancient well nearby. Good parallels in the region are S. Giacomo degli Schiavoni (Albarella, Ceglia, and Roberts 1993); Matrice (Lloyd and Rathbone 1984; Lloyd 1991); S. Giovanni di Ruoti (Small and Buck 1994).

#### **Drawing selection**

1. ARS, rim, b-c, R3 (Hayes 61a)
2. ARS, rim, b, -, R2 (Hayes 8a)
3. CW, base, b1, 1.1, spiral motive on the bottom (outside)
4. CW, handle, b, 1.4.
5. CW, handle, b-e, 1.0
6. CW, rim, b-g, 0.5
7. CW, rim, b1, 0.5
8. CW, rim, b-g, 0.5
9. CW, base, e, 0.5
10. CW, rim, e-g, 0.5
11. CW, base, g1, 0.4
12. CW, handle, c, 0.7
13. CW, rim, e1, 0.4
14. CW, base, g, 0.8
15. CW, base, g, 0.4
16. CW, rim, b1, 0.5
17. CW, lid, b1, 0.8
18. CW, base, e-g, 1.0
19. CW, rim, b, 1.5
20. CW, rim, b-g, 0.6
21. CW, rim, b, 0.3
22. CW, rim, b, 0.3
23. CW, rim, b1, 0.4
24. CW, rim, f, 0.5
25. CW, e-g, 1.1, circular decoration inside
26. CW, base, e-g, 1.0
27. CW, base, c-g, 0.9
28. CW, base, e-f, 0.8
29. CW, handle, h, 1.3
30. CW, base, d, 0.8
31. GML, rim, -, 0.5
32. IMP, base, -, 1.0
33. ITS, base, c-g, 0.7, R1
34. LW, f
35. PW, rim, d, 0.7
36. redpainted, base, a-b, 0.4
37. TIL
38. TT, wall
39. TT, lid, g, 0.5
40. Amp, rim, d
41. TERFIG, horse

#### **Site G8 (units 442-443)**

Location: Casa Pistili, 479230E, 4605922N alt. 739 m, slightly sloping (3.8°).

Sampling: T-10 m.

Land use/ tillage/visibility: Arable/ finely ploughed/ 4.

Size/density/quality: 0.55 ha, nucleus 0.07 ha/ halo: 0.1 per m<sup>2</sup>, nucleus 10-15 per m<sup>2</sup>/ good.

Categories: CW-4; DO-2; ITS-1; PW-2; TIL-56; UN-34.

Interpretation: Farm or sub-structure belonging to the nearby villa (site G7).

Chronology:

R1 attested to by ITS.

Remarks: Ancient well nearby.

#### Drawing selection

1. CW, handle, e1, 0
2. DO, rim, b1, 2.8
3. ITS, wall/rim, 0.5, R1
- 4.-5 TIL

#### Site G9 (346-347, 501-727)

Location: Colle Rimontato, 479605E, 4605230N alt. 686 m, sloping (8.3°).

Sampling: T-2 m.

Land use/ tillage/visibility: Arable/ finely ploughed/ 2-4.

Size/density/quality: 2.2 ha, nucleus 0.05 ha/ halo: 0.1 to 2.5 per m<sup>2</sup>, high density areas: 15+ per m<sup>2</sup>/ good.

Categories: ARCH-6; ARS-2; AU-2; BG-51; CC-42; CC-5; CP-27; CW-502; DO-17; GL-14; GML-1; IMP-58; ITS-2; LW-1; MS-1; PRW-1; PS-1; PW-123; STV-24; TIL-1374; UN-944; WAS-2.

Interpretation: Sanctuary. During the intensive 10x10 m survey of the field to the north-east of the sanctuary a small but dense concentration of Roman ceramics and tiles have been found, as well as millstone. This scatter tentatively suggests the presence of a rural structure in the close neighbourhood of the sanctuary during the Roman period.

Chronology:

H1: Clearly attested by BG (e.g. nos. 10,12, 13, 15).

H2: attested by BG (No. 6) and Amph (Dressel 1).

R1: attested by (few) ITS shards.

R2: ARS (Hayes 8A) attests activity in this period.

Remarks: Two large wells are located nearby. Magnetometer prospection was carried out in the fields to the SE of the sanctuary. Di Niro 1980, 271 reports that graves of the Samnite period have been located nearby the sanctuary at Colle Rimontato. The survey has not located them as the Colle Rimontato is covered with woodlands. A small fragment of bronze found in Unit 307 near the top of Colle Rimontato could possibly be connected to the

undiscovered graves. A Roman funeral inscription has been found on Colle Rimontato, now in the Soprintendenza's depot (inv. 51412). Three rectangular shaped features cut in the bedrock have been recognized behind the sanctuary, they are, however, too small to be Samnite graves. A more recent agrarian function seems more plausible.

Bibliography:

La Regina 1966, 261; La Regina 1970, 196; Strazzulla 1971, 16; La Regina 1976; 237-241; Di Niro 1977, 38-40; Di Niro 1978a; Di Niro 1978b; Di Niro 1980; Coarelli and La Regina 1984, 295-298; Zaccardi 2007; cf. Stek 2009, Ch. 3 and 5.

#### Drawing selection

1. ARS, rim, b, 0.3, R1 (Hayes 8A)
2. ARS, base, b, 0.4, R2-3
3. ARS, base, b, -, R2-3
4. Amph, rim, cd, H2, (Dressel 1a)
5. Amph, tap
6. BG, rim, d, 0.4, H2 (cf. Morel 2650)
7. BG, base, c, -, H
8. BG, rim, d, 0.4, H (cf. Morel 1310-1320)
9. BG, wall, d, 0.4, H, Hydria
10. BG, rim, d, 0.4, H1, (cf. Rainini 1996, 110 No. 179)
11. BG, wall, d, 0.6, *unguentarium*, H (cf. Morel 7111)
12. BG, rim, d, 0.4, H1 (cf. Morel 2783h1).
13. BG, rim, d, 0.5, H1 (cf. Morel 2586).
14. BG, base, d, -, H
15. BG, rim, d, 0.4, H1 (cf. Rainini 1996, 110 no. 179)
16. BG, handle, d,-
17. CW, rim, c, 1.0
18. CW, lid, c1,-
19. CW, base, f1,-
20. CW, handle, c-h, 2.0
21. CW, base, b, 0.6
22. CW, rim, c, 0.4
23. CW, base, b-h,-
24. CW, rim, b, 0.3
25. CW, rim, b1, 0.9
26. CW, base, c-h, 0.7
27. CW, rim, b1, 0.2
28. CW, base, b1, 0.7
29. CW, lid, c-g,-
30. CW, rim, f, 0.3
31. CW, lid, b1,-
32. CW, rim, c-g, 0.3
33. ITS, base, d,-
34. LAB, rim, d, 0.3
35. LW, f
36. PW, wall, b, 0.4

37. PW, handle, d, 1.5

38-50. TIL

**Site G10 (units 95-96)**

Location: Colle Cifello, 480446E, 4604777N, alt. 570 m, sloping (8.9°).

Sampling: T-10 m.

Land use/ tillage/visibility: Olives & viticulture/ none/ 4.

Size/density/quality: 0.1 ha/ halo 0.2 per m<sup>2</sup>, high density areas: 5 per m<sup>2</sup>/ good.

Categories: CW-9; GL-4; PW-2; TIL-114; UN-41.

Interpretation: farm.

Chronology:

M: CWs are datable to this chronological horizon.

**Site G11 (ca. 35 m. north of unit 256)**

Location: 480667E, 4604947N; alt. 583 m, sloping (8.7°).

Interpretation: circular stone structure. Locals interpret it as a small chapel or a stone oven.

Chronology:

M-SR: H material especially tiles are found around the structure. The construction however seems to be of a later date (poss. M).

**Site G12 (units 2005-06, 2010-11)**

Location: loc. Masseria Graziano, 479089E, 4605173N alt. 660 m., sloping (11.8°).

Sampling: 1<sup>st</sup> visit T-10 m.; 2<sup>nd</sup> visit D-2 m.

Land use/ tillage/visibility: Arable/ finely ploughed/ 3-4/ good.

Size/density/quality: halo 0.9 ha, nucleus 1: 0.02 ha, nucleus 2: 0.01/ halo 0.2 per m<sup>2</sup>; nuclei: 10-15 per m<sup>2</sup>/ good.

Categories: ARS-5; BG-5; CP-1; CW-123; DO-2; GL-16; ITS-6; PW-24; TIL-54; UN-143.

Interpretation: Farm with possible sub-structure (barn).

Chronology:

H1: BG form No. 6 suggests H1 occupation.

H2: clearly attested to by BG forms nos. 4-5.

R1: ITS (e.g. nos. 32-34) attests to R1 occupation.

R2: ARS (Hayes 9B) and several CW date to this period.

R3: attested (e.g. no.3) ARS (Hayes 61A) form datable in the fourth century.

**Drawing selection**

1. ARS, rim, b, 0.5, R2, (Hayes 9B)

2. ARS, base, b, 0.4, R

3. ARS, rim, a-b, 0.7, R3, (Hayes 61A)

4. BG, rim, e, -, H2 (cf. Morel 1262a1)

5. BG, base, e, -, H2 (cf. Morel 7544)

6. BG, handle, b, H

7. CW, rim, b, 0.4

8. CW, handle, b1, 0.7

9. CW, rim, h1, 0.6

10. CW, base, b1, 0.5

11. CW, rim, g1, 0.5

12. CW, rim, b, 0.4

13. CW, e, 0.3

14. CW, rim, g1, 0.5

15. CW, rim, b1, 0.5

16. CW, base, b1, 0.6

17. CW, rim, c, 0.8

18. CW, base, 0.7

19. CW, rim, b1, 0.5

20. CW, rim, b1, 0.6

21. CW, rim, b-e1, 0.4

22. CW, rim, b1, 0.5

23. CW, rim, d-b1, 0.5

24. CW, base, b1, 0.7

25. CW, rim, b1, 0.5

26. CW, rim, b1, 0.6

27. CW, rim, b-g, 0.5

28. CW, rim, b-g, 0.3

29. CW, rim, g1, 0.5

30. CW, handle, b1, 0.3

31. CW, handle, b1, 0.6

32. ITS, base, a, -, R1

33. ITS, base, a, 0.5, R1

34. PW, handle, a-d, 2.5

35. PW, rim, b, 0.4

36. PW, handle, b, 2.2

**Site G13 (units 2036, 2044-2047)**

Location: San Biase; 478883E, 4605705N, alt. 725 m, sloping (7.8°).

Sampling: 1<sup>st</sup> visit: T-10 m.; 2<sup>nd</sup> visit: G; 3<sup>rd</sup> visit: D-2 m.

Land use/ tillage/visibility: Arable/ finely ploughed/ 2-4.

Size/density/quality: halo 1.9 ha, nucleus: not defined/ halo: 0.2 per m<sup>2</sup>; high density areas/ nuclei: 10-15 per m<sup>2</sup>, very worn.

Categories: ARS-7; CW-104; DO-1; GL-11; IMP-1; ITS-1; PW-10; TIL-14; UN-320.

Interpretation: Farm or small villa.

Chronology:

R1: ITS shard dates to this period.

R2: attested to by e.g. Hayes 8B.

R3: some CWs fit this chronological horizon.

Remarks: ancient well nearby.

**Drawing selection**

1. ARS, rim, b, 0.3, R2, (Hayes 8b)

2. CW, rim, h1, 0.6

3. CW, rim, b1, 0.4

4. CW, rim, h1, 0.8
5. CW, rim, c-g, 0.4
6. CW, rim, g, 0.4,
7. CW, rim, b, 0.4
8. CW, rim, h1, 0.5
9. CW, rim, h1, 0.6
10. CW, base, c, 0.6
11. CW, rim, g-h, 0.7
12. CW, base, h1,-
13. CW, base, c, 0.5
14. CW, rim, b1, 1.0

#### **Site G14 (units 2308,-11-14, 2402, 2999)**

Location: Casa Serniese, 478537E, 4605101N, alt. 683 m, sloping (8.3°).

Sampling: 1<sup>st</sup> visit: T-10 m.

Land use/ tillage/visibility: Arable & viticulture/ arable areas finely ploughed/ 1-4.

Size/density/quality: halo 0.9 ha, nucleus 1: 0.1ha, nucleus 2: 0.03/ halo 0.2 per m<sup>2</sup>; nuclei: 15+ per m<sup>2</sup>/ varying.

Categories: ARS-3; CP-1; CW-125; GL-9; IMP-31; PW-15; TIL 27; UN-303.

Interpretation: Villa rustica in the Roman period. In the same area probably also a more modest rural structure was present in the pre-Roman period.

#### Chronology:

PP/H: IMP shards (number and fabric) are datable to the pre-Roman period. Most IMPs derive from a limited zone immediately to the south of casa Serniese, while the latter Roman site is identified to the north of casa Serniese. It is therefore unlikely that the IMP indicate a pre-Roman phase of the villa, it more likely belongs to a different, unrelated reality.

R1: attested by ITS shard (no. 14).

R2: continuation in R3 and several Roman CWs make occupation in this period likely.

R3: ARS (no. 2) attest to occupation in this period.

Remarks: The nucleus of the site is located in a bushy area where large numbers of tiles and stones, big pieces of *opus spicatum* and parts of standing walls have also been recognized. The site was revisited in 2008 (see for results below Appendix IV).

#### **Drawing selection**

1. ARS, base, b, 0.7, R
2. ARS, rim, b, 0.7, R3 (Hayes 61A)
3. CW, base, e1, 0.4
4. CW, rim, g, 0.4
5. CW, base, e1, 0.5
6. CW, rim, b, 0.4

7. CW, rim, c, 0.3
8. CW, rim, h, 0.5
9. CW, handle, h, 1.0
10. CW, base, h, 0.8
11. IMP, rim, I, 1.0
12. IMP, rim, I, 0.9
13. IMP, base, L, 1.0
14. ITS, rim, b, 0.7, R1 (Ettlinger et al. 1990, No. 14)
15. TT, wall, g1, 0.5
16. TT, wall, h1, 0.7
- 17-19. TIL
20. UN, g, 2.5

#### **Site G15 (units 2309-2310)**

Location: Casa Ramacciato (Casali); 478412E, 4604918N, alt. 661 m, sloping (9.8°).

Sampling: 1<sup>st</sup> visit: T-10 m.; 2<sup>nd</sup> visit: G; 3<sup>rd</sup> visit: D-2 m.

Land use/ tillage/visibility: Arable; finely ploughed; 3.

Size/density/quality: halo 0.7 ha, nucleus 1: 0.04, nucleus 2: 0.05/ halo: 0.2 per m<sup>2</sup>; high density areas/ nuclei: 10-15 per m<sup>2</sup>, good.

Categories: BG-12; CW-16; DO-4; IMP-3; LW-2; PW-12; TIL-32; UN-28.

Interpretation: Relatively high quality of fine wares in combination with loom weights may suggest a function beyond the domestic/agrarian.

#### Chronology:

H1 is firmly attested by early BG forms (second half 4<sup>th</sup>-3<sup>rd</sup> centuries BC; especially *skyphoi* such as nos. 1, 2, 6, 7) with parallels in Campochiaro scarico A (nos. 2, 6) and Fonte del Romito Phase II (no. 4). There is nothing to suggest a later occupation of the site.

Remarks: Worked stones are located in the bushes between the two nuclei. An ancient well is nearby.

#### **Drawing selection**

1. BG, base, b, 0.3, H1 (cf. Morel 4311a2)
2. BG, base, d, 0.6, H1 (cf. Capini 1984, 32 Fig. 7, nos. 68 and 70)
3. BG, rim, d, 0.4
4. BG, rim, d, 0.5, H1 (cf. Rainini 1996, 123 nos. 240-241; Morel 1552)
5. BG, base, a,-
6. BG, base, b, 0.6, H1 (cf. Capini 1984, 32 Fig. 7, no. 65; Morel 4373)
7. BG, base, d, 0.5, H1 (cf. Morel 4340)
8. CW, handle, e, 1.0
9. CW, base, c1-f1, 0.6
10. CW, rim, h, 0.8

11. CW, base, c1, 0.7
12. IMP, handle, K, 1.4
- 13-14. LW
15. PW, handle, d, 2.1
16. PW, rim, d-f, 0.6
- 17-20. TIL

#### **Site G16 (units 2342-2344)**

Location: Bivio di Matrice; 479593E, 4606115N, alt. 716 m, sloping (9°).

Sampling: 1<sup>st</sup> visit: T-10 m.; 2<sup>nd</sup> visit: D-2 m.

Land use/ tillage/visibility: Arable; finely ploughed; 4.

Size/density/quality: halo 2 ha, nucleus 1: 0.02, nucleus 2: 0.02; halo: 0.01 per m<sup>2</sup>; high density areas/ nuclei: 5-10 per m<sup>2</sup>, good.

Categories: ITS-1; BG-3; CW-19; PW-3; TIL-8; UN-18.

Interpretation: Farm with possible sub-structure (barn).

Chronology:

H: H1 is clearly attested to (no. 1 has many parallels in Fonte del Romito Phase II and Campochiaro scarico A). H2 is probable given that most CWs are also (but not exclusively) present in H2 contexts (e.g. Fonte del Romito Phase III) and the continuity in R1.

R1: sporadic material from this period (ITS shard).

Remarks:

A large concentration of stones and ancient tiles was located nearby.

#### **Drawing selection**

1. BG, rim, d, 0.4, H1 (cf. *Campochiaro* 1982, 36 nr. 32; Rainini 1996, 108. no. 178; Morel 2780)
2. BG, rim, b, 0.4, (cf. Morel 4341)
3. CW, rim, c1, 0.6
4. CW, rim, h1, 0.6
5. CW, base, b, 0.8
6. CW, rim, b1, 0.5
7. CW, rim, g1, 0.8
8. PW, rim, d, 0.4
9. PW, base, d-g, 0.7
- 10-11. TIL

#### **Site G17 (units 2454-2455)**

Location: Ingiuno; 480636E, 4605355N, alt. 595 m, sloping (7.8°).

Sampling: 1<sup>st</sup> visit: T-10 m.; 2<sup>nd</sup> visit: D-2 m.

Land use/ tillage/visibility: Arable; finely ploughed; 4.

Size/density/quality: halo 0.36 ha, nucleus 1: 0.09, nucleus 2: 0.02; halo: 0.015 per m<sup>2</sup>; high density areas/ nuclei: 15> per m<sup>2</sup>, good.

Categories: ARS-1; CW-58; DO-1; IMP-35; PW-9; TIL-18; UN-76.

Interpretation: Farm with possible sub-structure (barn).

Chronology:

R: most CWs are probably of R3 period. No clear indications for earlier occupation have been identified.

Remarks:

Large pile of stones and tiles is found in centre of the site (around a tree).

#### **Drawing selection**

1. CW, lid, b1, 0.6
2. CW, lid, b1, 0.5
3. CW, base, g, 0.5
4. CW, rim, g1, 1.3
5. CW, base, b1, 0.5
6. CW, rim, g1, 0.8
7. CW, base, g1, 1.0
8. CW, base, g1, 0.3,
9. CW, base, g1, 0.9
10. CW, base, h1, 0.9
11. CW, rim, b1, 0.6
12. CW, rim, e1, 0.8
13. CW, wall, e, 0.7
14. DO, rim, g1, 1.2
15. PW, base, b, 0.5
16. PW, rim, d, 1.1
- 17-22. TIL

#### **Site G18 (unit 2444-2448)**

Location: Ingiuno; 480714E, 4605412N, alt. 563 m, sloping (18°).

Sampling: T-10 m.

Land use/ tillage/visibility: Arable; finely ploughed; 4.

Size/density/quality: halo 1.8 ha, nucleus not identified; halo: 0.01 per m<sup>2</sup>; high density areas/ nuclei: 10-15 per m<sup>2</sup>, very worn.

Categories: ARS-1; BG-3; CW-79; DO-2; GL-1; IMP-1; PW-17; TIL-29; UN-119.

Interpretation: very diffuse scatter. Collected material is probably slope wash.

Chronology:

H: BG's and some CWs fit a H chronological horizon. Worn state of most shards makes more detailed dating impossible.

R: ARS and most CW date to this period.

#### **Drawing selection**

1. CW, base, c, 0.4
2. CW, rim, b1, 0.4
3. CW, handle, h, 0.6
4. CW, rim, c-g1, 1.6
5. CW, rim, g1, 0.4

6. CW, rim, h, 0.7
7. CW, rim, d, 0.9
8. CW, rim, a, 0.8
9. TIL

**Site G19 (unit 2461)**

Location: Sorgente Coverchiata; 480706E, 4605196N, alt. 574 m, sloping (6.8°).

Sampling: T-10 m.

Land use/ tillage/visibility: Arable; finely ploughed; 4.

Size/density/quality: halo 1.1 ha (with G21), nucleus 0.05; halo: 0.01 per m<sup>2</sup>; high density areas/ nuclei: 10-15 per m<sup>2</sup>, worn.

Categories: ARS-1; BG-1; CW-31; DO-1; GL-2; IMP-16; PW-7; TIL-3; UN-43.

Interpretation: Farm.

Chronology:

H, H2 is probable based on continuity in R1. Most CW forms are also attested (but not exclusively) in H2 context of Fonte del Romito. IMP shards are probably distortions from G21.

R1: attested to by no.1 which dates 80/90-180+ AD.

**Drawing selection**

1. ARS, rim, b, 0.5, R1 (Hayes 9A)
2. CW, base, g1, 0.7
3. CW, rim, g, 0.5
4. CW, rim, b1, 0.9
5. CW, base, e1, 0.6
6. CW, base, h1,-
7. CW, base, c1, 0.8

**Site G20 (units 2451-2453)**

Location: Sorgente Coverchiata- area Ingiuno; 480625E, 4605277N, alt. 590 m, sloping (6.9°).

Sampling: 1<sup>st</sup> visit: T-10 m.; 2<sup>nd</sup> visit: D-2 m.

Land use/ tillage/visibility: Arable; finely ploughed; 4.

Size/density/quality: halo 0.3 ha, nucleus 0.05; halo: 0.025 per m<sup>2</sup>; high density areas/ nuclei: 15> per m<sup>2</sup>, good.

Categories: ARS-1; AU-1; CW-30; DO-1; GL-1; IMP-33; PW-16; TIL-many(not collected); UN-67.

Interpretation: probably part of the larger nucleated settlement (see also G2 & G3).

Chronology:

PP: Some IMP (cf. no. 8) clearly predate H period.

H: No clear diagnostics have been recognized, but some CW and PW forms fit the chronological horizon and make

occupation in this period likely.

R: clearly attested (ARS) and several CWs.

**Drawing selection**

1. CW, handle, d, 1.3
2. CW, rim, c1, 1.7
3. CW, rim, b1, 0.6
4. CW, rim, h1, 0.7
5. IMP, rim, I, 0.4
6. IMP, rim, I, 1.1
7. IMP, rim, I, 0.5
8. IMP, rim, E, 0.5
9. PW, rim, d, 0.4
10. TIL

**Site G21 (unit 2460)**

Location: Sorgente Coverchiata; 480673E, 4605232N, alt. 580 m, sloping (8.5°).

Sampling: 1<sup>st</sup> visit: T-10 m.; 2<sup>nd</sup> visit: D-2 m.

Land use/ tillage/visibility: Arable; finely ploughed; 4.

Size/density/quality: halo 1.1 ha (with G19), nucleus 0.1 ha; halo: 0.015 per m<sup>2</sup>; high density areas/ nuclei: 15> per m<sup>2</sup>, very good.

Categories: BG-1; CW-23; GL-1; IMP-92; PW-1; TERfig-1.

Interpretation: The impasto material of exceptional quality in combination with worked stone, (decorated) loom weights and a terracotta figurine, as well as the location near the perennial spring of Fonte Coverchiata, suggest a ritual function of the site; a domestic function is not to be excluded (see main text).

Chronology:

PP: IMP forms suggest rather a PP2-3 horizon rather than PP1.

Remarks: many animal bones of predominantly sheep and cattle were found on the site.

**Drawing selection**

1. IMP, base, C, 1.4
2. IMP, base, K, 1.4
3. IMP, handle, O, 1.9
4. IMP, rim-handle, A, 0.7
5. IMP, rim-handle, O, 0.7
6. IMP, rim, C, 0.5
7. IMP, rim, C, 1.1
8. IMP, rim, A, 1.5
9. IMP, -, C, 4,0, spindle whirl
10. IMP, rim, O, 0.6
11. IMP, rim, A, 0.5
12. IMP, rim, C, 0.7
13. IMP, rim, B, 1.0
14. IMP, rim, O, 0.4

15. IMP, rim, C, 0.9
16. IMP, rim, C, 0.8
17. IMP, rim, K, 0.7
18. IMP, rim, O, 1.4
19. IMP, rim, M, 2.2
20. IMP, rim, C, 1.7
21. IMP, handle, C, 1.0
22. IMP, handle, C, -
23. IMP, handle, C, -
24. IMP, rim, O, 0.7
25. IMP, handle, C, 1.1 (Bailo-Modesti 1980, tav. 34)
26. IMP, rim, B, 1.8
27. IMP, rim, O, 0.7
28. LW
29. LW with circular decoration
30. TERfig
31. STO, with circular incisions

#### **Site G22 (units 2380-2393)**

Location: Ingiono; 480598E, 4605973N, alt. 540 m, sloping (9.8°).

Sampling: 1<sup>st</sup> visit: T-10 m.; 2<sup>nd</sup> visit: D-5 m.

Land use/ tillage/visibility: Arable; finely ploughed; 4.

Size/density/quality: halo 2.9 ha, several distinct and very small nuclei have been identified (c. 0.01ha); halo: 0.01 per m<sup>2</sup>; high density areas/ nuclei: 10-15 per m<sup>2</sup>, good.

Categories: BG-25; CC-1; CW-136; DO-18; GL-4; IMP-46; LAR-1; PW-20; TIL-35; UN-117.

Interpretation: Necropolis. This is suggested by the presence of several small but distinct scatters with high quality ceramics.

#### Chronology:

PP: the dark grey buccheroid fabric of many IMPs have parallels in the Campochiaro and Pozzilli necropoleis of the Archaic Period (see main text). Together with the typology of most CWs and PWs, this indicates a PP3 chronology (possibly BG No. 7 belongs to this period). However, several IMPs could also be compatible with a PP2 chronology.

H1: is well represented by early BG forms of the late fourth/early third centuries (e.g. nos 1, 3, 4, 6, which have parallels in Campochiaro Scarico A).

H2/R1: sporadic activity in this period is suggested by No. 41 and some CWs.

Remarks: Good parallels are the Campochiaro sanctuary and Pozzilli necropolis (Capini 1984; Capini 1991c).

#### **Drawing selection**

1. BG, base, d, 0.6, H1 (cf. Capini 1984, 32 Fig. 7, nos. 68, 70)

2. BG, base, a, 0.8, H1 (cf. Morel 2430)
3. BG, base, e, 0.6, H1 (cf. Capini 1984, 29 Fig. 6, nos. 67, 69)
4. BG, base, f, 0.6, H1 (cf. Capini 1984, 32 Fig. 7, nos. 68; Morel 4363a)
5. BG, rim, a, 0.5
6. BG, base, d, 0.7, H1, see nos. 3 and 4.
7. BG, handle, d, 0.9, H1 (cf. Morel 4253)
8. CW, base, c1, 0.8
9. CW, rim, b1, 0.7
10. CW, rim, b1, 0.6
11. CW, rim, g1, 0.4
12. CW, base, e1, 0.6
13. CW, base, e1, 0.3
14. CW, handle, c1, 1.0
15. CW, rim, h, 0.6
16. CW, rim, e, 0.8
17. CW, base, b1, 1.3
18. CW, rim, e, 0.5
19. CW, rim, b, 0.5
20. CW, base, h1, 1.0
21. CW, base, e1, 0.7
22. CW, lid, c1, -
23. CW, base, h, 1.1
24. CW, rim, h, 0.7
25. CW, handle, h, 2.0
26. CW, base, h, 0.4
27. CW, rim, f, 0.8
28. CW, base, h, 0.7
29. CW, base, g, -
30. CW, handle, b, 2.1
31. IMP, base, I, 1.8
32. IMP, rim, G, 2.2
33. IMP, base, A, 0.6
34. IMPb, rim, 0, 0.5
35. IMPb, rim, 0, 0.6
36. IMPb, rim, 0, 0.7
37. IMPb, rim, 0, 0.7
38. IMPb, base, 0, 0.7
39. IMPb, rim, 0, 0.5
40. IMP, rim-handle, E, 0.4
41. LAR, 0., 2,
42. PW, rim, b, 0.5
43. PW, rim, a, 0.5
- 44-45. TIL

#### **Site G23 (units 2366-2368)**

Location: 480211E, 4606471N, alt. 627 m, sloping (17.2°).

Sampling: T-10 m.

Land use/ tillage/visibility: Arable & Olives; arable areas finely ploughed; 4.

Size/density/quality: halo 0.8 ha, nucleus (size not determinable) is identified outside survey area; halo: 0.01 per m<sup>2</sup>; high density areas/ nuclei: 5 per m<sup>2</sup>, worn.



Categories: CW-9; DO-1; IMP-5; PW-6; TIL-13; UN-27.

Interpretation: Farm.

Chronology:

H: CW s do not allow a more precise dating, but the IMPs suggest H rather than later chronology.

Remarks:

The defined scatter most probably is off-site material. A pile of stones and ancient tiles has been identified to the north of the scatter in a bushy area. This probably constitutes the source of the surface scatter.

#### **Drawing selection**

1. CW, rim, d1, 0.3
2. CW, base, e, 1.3
- 3-7. TIL

#### **Site G24 (unit 2015)**

Location: 478995E, 4605282N, alt. 676 m, sloping (10.8°).

Sampling: 1<sup>st</sup> visit: T-10 m.; 2<sup>nd</sup> visit: G, 3<sup>rd</sup> visit: G.

Land use/ tillage/visibility: Arable; finely ploughed; 3-4.

Size/density/quality: halo 0.1 ha, nucleus not determined; halo: 0.02 per m<sup>2</sup>; high density areas/ nuclei: 5 per m<sup>2</sup>, average.

Categories: CW-29; GL-1; PRW-1; PW-18; PS-1; TIL-3; UN-11.

Interpretation: The absence of building material (such as stones and brick) and the few TIL, in combination with the high percentage of CW and PW make a domestic agrarian function unlikely. A funerary context is amongst the possibilities (although, for example, in the early Roman necropolis in loc. Quadrella (Aesernia) graves are from the 'a cappucina' type which are characterized by the use of many tiles; cf. Terzani and Matteini Chiari 1997).

Chronology:

H2/ R1-2: CW best fit this chronological horizon.

#### **Drawing selection**

1. CW, handle, b1, 1.4
2. CW, rim, g1, 0.4
3. CW, rim, b1, 0.4
4. CW, base, e1, 0.4
5. CW, rim, b1, 0.6
6. CW, handle, b1, 0.9

#### **Site G25 (units 216-219; 222; 267; 293-294)**

Location: 479941E, 4605604N, alt. 674 m,

sloping (6.2°).

Sampling: 1<sup>st</sup> visit: T-10 m.

Land use/ tillage/visibility: Arable; finely ploughed; 3-4.

Size/density/quality: halo 1.7 ha, nucleus not determined; halo: 0.005 per m<sup>2</sup>; high density areas/ nuclei: 5 per m<sup>2</sup>, worn.

Categories: CW-13; GL-4; IMP-48; PW-4; TIL-10; UN-44.

Interpretation: Diffuse scatter of IMP shards, possibly indicative of a PP site. State of material does not allow a more precise interpretation.

Chronology:

PP: IMP suggest PP chronology, the material is too worn to date more precisely. The other material (GL, CW TIL etc) is modern distortion and off site material from G05.

#### **Site G26 (units 2290-2291)**

Location: Casa Ramacciato (Casali); 478215E, 4604896N, alt. 622 m, sloping (8.2°).

Size/density/quality: unit 2290 0.30 ha, density 0.003 per m<sup>2</sup>, unit 2291 0.19 ha, 0.006 per m<sup>2</sup>.

Sampling: 1<sup>st</sup> visit: T-10 m.

Land use/ tillage/visibility: Arable; finely ploughed; 3-4.

Categories: BG-1; CW-8; ITS-1; TIL-3; UN-9.

Interpretation: The finds have been recognized near a bushy area; most likely they pertain to a site located in this non-visibility area. The function of this probable site cannot be established.

Chronology:

H: attested to by BG. Continuity in R1 makes H2 probable.

R1: Some CWs and ITS are datable to this period.

#### **Drawing selection**

1. BG, rim, a, 0.5, H
2. CW, base, b1, 0.9
3. CW, base, b, 0.5
4. CW, base, b, 0.3
5. CW, handle, b, 2.5
6. CW, base, h, 0.9
7. CW, handle, b, 0.8
8. CW, base, h, 0.4

#### **Site G27 (unit 2368)**

Location: 480230E, 4606414N, alt. 618 m, sloping (12.8°).

Sampling: 1<sup>st</sup> visit: T-10 m.

Land use/ tillage/visibility: Arable; finely ploughed; 3-4.

Size/density/quality: located in halo G23; *ibid*; good.

Categories: IMP-2.

Interpretation: Two isolated decorated Bronze Age shards have been identified in the periphery of the halo of site G23. The chronology and quality excludes a relation with this archaeological reality. The isolated finds are difficult to interpret, but possibly relate to graves.

Chronology:

PP1: IMP are clearly of the Bronze Age (Apennine) cf. e.g. the Fonte Maggio settlement (Barker 1995, 133-137).

#### Drawing selection

1. IMP, rim, O, 0.5, PP1

2. IMP, rim, O, 0.4, PP1

#### Appendix IV: Sites recognized during field survey in 2008 based on GIS analysis (JW)

##### Extension G14 (units 2175, 2176, 2179, 4000)

During revisits to three fields (in units 2175, 2176, 2179) to the south of the earlier recognized site G14, large quantities of heavily worn building material and pottery were found, as well as an apparently separate concentration of ceramics and building materials in the southern parts of these fields. This suggests that the earlier recognized villa-site was larger than previously believed. Also in a freshly ploughed field located to 50 m to the west of these units, a separate concentration of ceramics has been recognized (unit 4000). The various scatters are probably part of a larger built-up area of the Roman period. In the area to the north (478603E, 4605342N) which was not sampled systematically, a large concentration of ancient building material was found, associated with a high density of material.

Location: Casa Serniese, 478537E, 4605101N, alt. 683 m, sloping (8.3°).

Sampling: 1<sup>st</sup> visit: T-10m, 2<sup>nd</sup> visit: T-10 m.

Land use/ tillage/visibility: Arable & viticulture/ arable areas finely ploughed/ 1-4.

Size/density/quality: in unit 4000; halo 0,485 ha, 0.23 per m<sup>2</sup>, nucleus 5 per m<sup>2</sup>.

Categories: CW-12, GL-4, PW-2, UN-15, TIL-5 (in units 2175, 2176, 2179), CW-8, TIL-3 (in unit 4000).

Interpretation: The 2008 visit yielded

indications of an additional structure of the Roman period to the east of the fields surveyed during the 1<sup>st</sup> visit (unit 4000).

Chronology: See G14 in Appendix III.

##### Site G28 (unit 2062)

Location: 479009E, 4605887N, alt. 738 m, sloping (6.5°).

Sampling: 1<sup>st</sup> visit: T-10 m.; 2<sup>nd</sup> visit: T-10 m.

Land use/ tillage/visibility: arable; roughly ploughed; 3.

Size/density/quality: size of halo and nucleus are not determinable. Most of the material comes from the southern part of the field (c. 0.33 ha), 0,005 per m<sup>2</sup>, good.

Categories: CW-2, PW-1, UN-1, TIL-3 (1<sup>st</sup> visit), CW-9; PW-3; TIL-7; UN-6 (2<sup>nd</sup> visit).

Interpretation: Farm.

Chronology:

H/R: CWs do not allow a more precise dating.

Remarks: Revisit of 2008.

##### Site G29 (unit 2602)

Location: 479770E, 4604428N, alt. 577 m, sloping (6.2°).

Sampling: 1<sup>st</sup> visit: T-10 m.; 2<sup>nd</sup> visit: T-10 m.

Land use/ tillage/visibility: Olives; arable areas finely ploughed; 3.

Size/density/quality: halo; 0,054 ha, ca 5 per m<sup>2</sup>, worn, nucleus in southern part of field; ca. 10 shards per m<sup>2</sup>, worn.

Categories: CC-5, GL-1, PW-1, STR-1, TIL-5, UN-14 (1<sup>st</sup> visit), CW-49; DO-1; GL-1; TIL-42; UN-157 (2<sup>nd</sup> visit).

Interpretation: Farm.

Chronology: 1<sup>st</sup> visit yielded some possible LR finds.

Remarks: Site found during revisit 2008.

##### Site G30 (units 2398-2399)

Location: 479227E, 4606642N, alt. 767 m, sloping (16.9°).

Sampling: 1<sup>st</sup> visit: T-10 m; 2<sup>nd</sup> visit: T-10 m.

Land use/ tillage/visibility: arable, roughly ploughed; 2.

Size/density/quality: the concentration of stone slabs of about 10 m diameter is situated in the northern half of unit 2399.

Categories: CW-8, BG-1, DO-1, PW-3, TIL-1, UN-4 (1<sup>st</sup> visit), CW-8, PW-1, UN-15, TIL-3 (2<sup>nd</sup> visit).

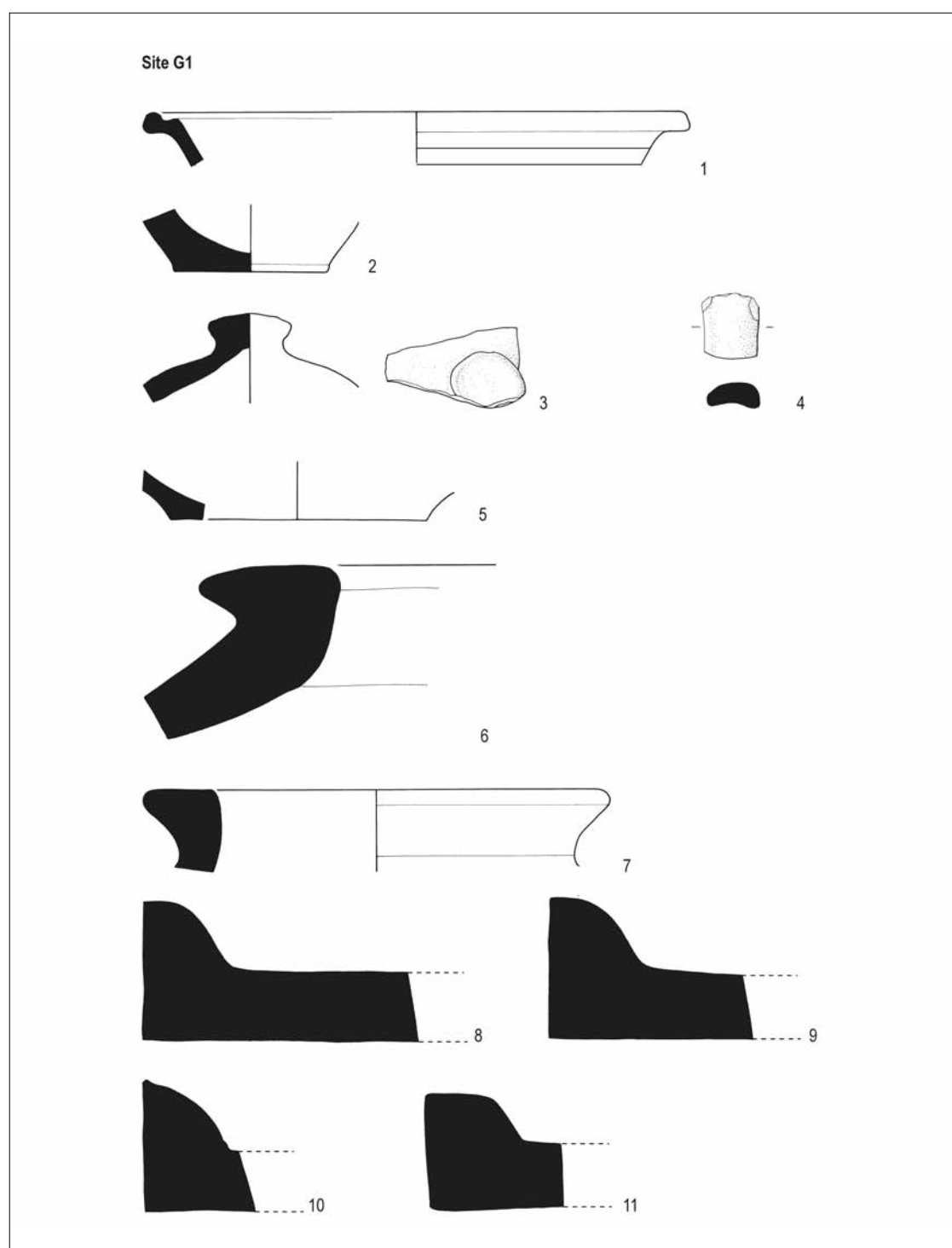
Interpretation: Tombs.

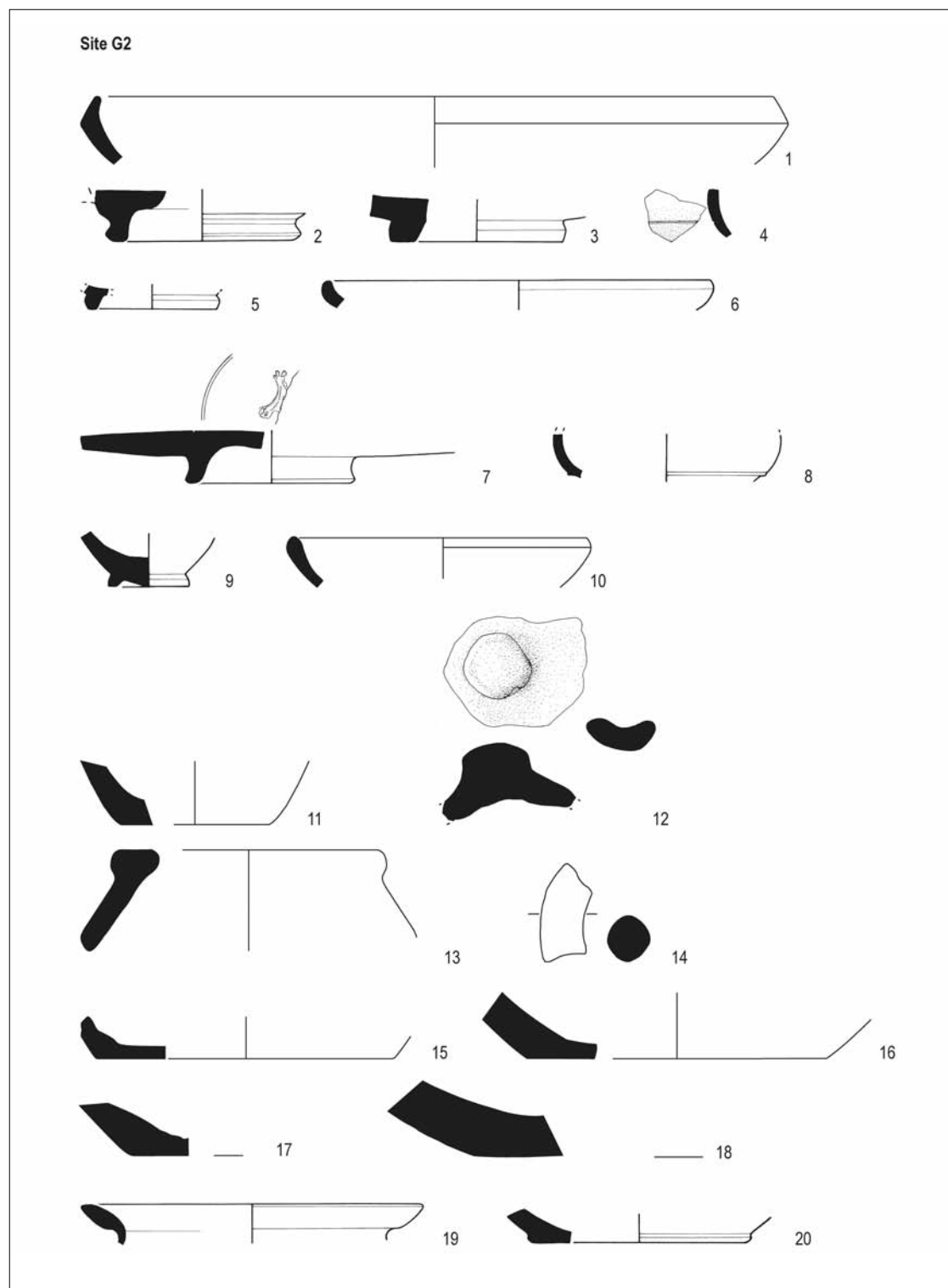
Chronology: All finds are clearly H/R.

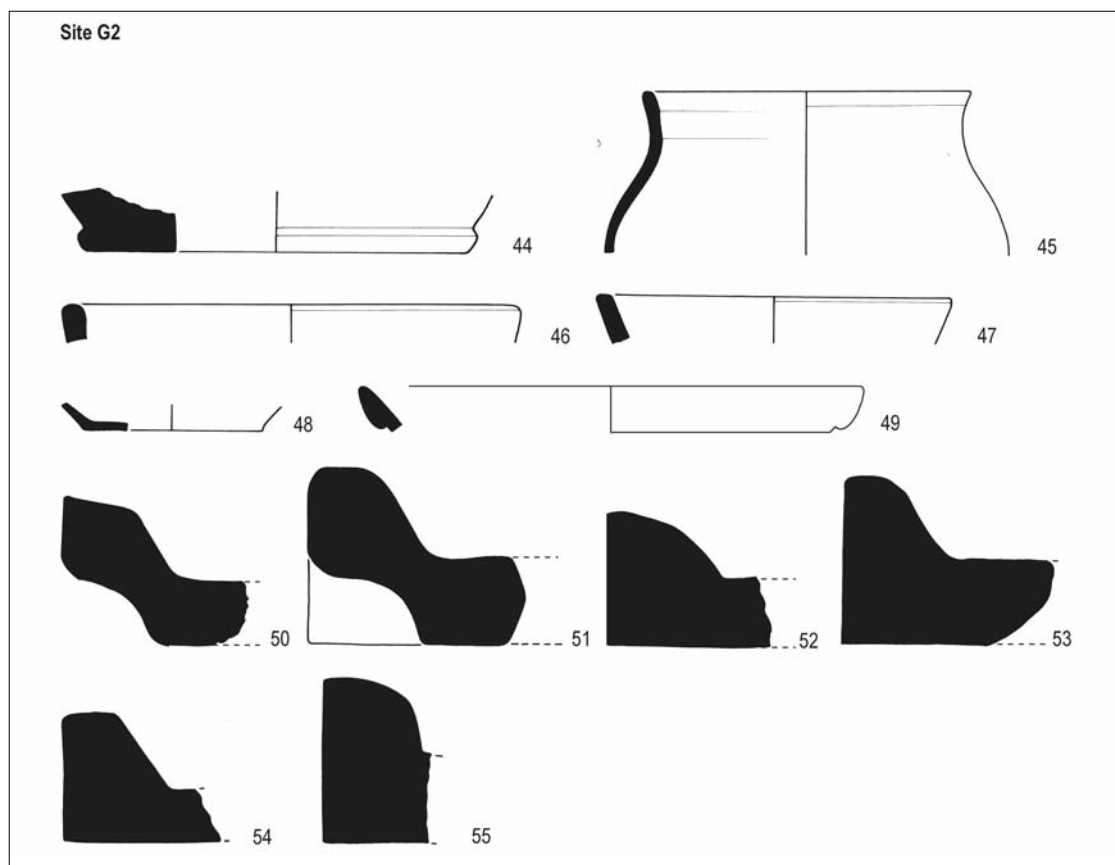
Remarks: Site found during revisit in 2008. Stone slabs, possibly indicate the presence of burials.

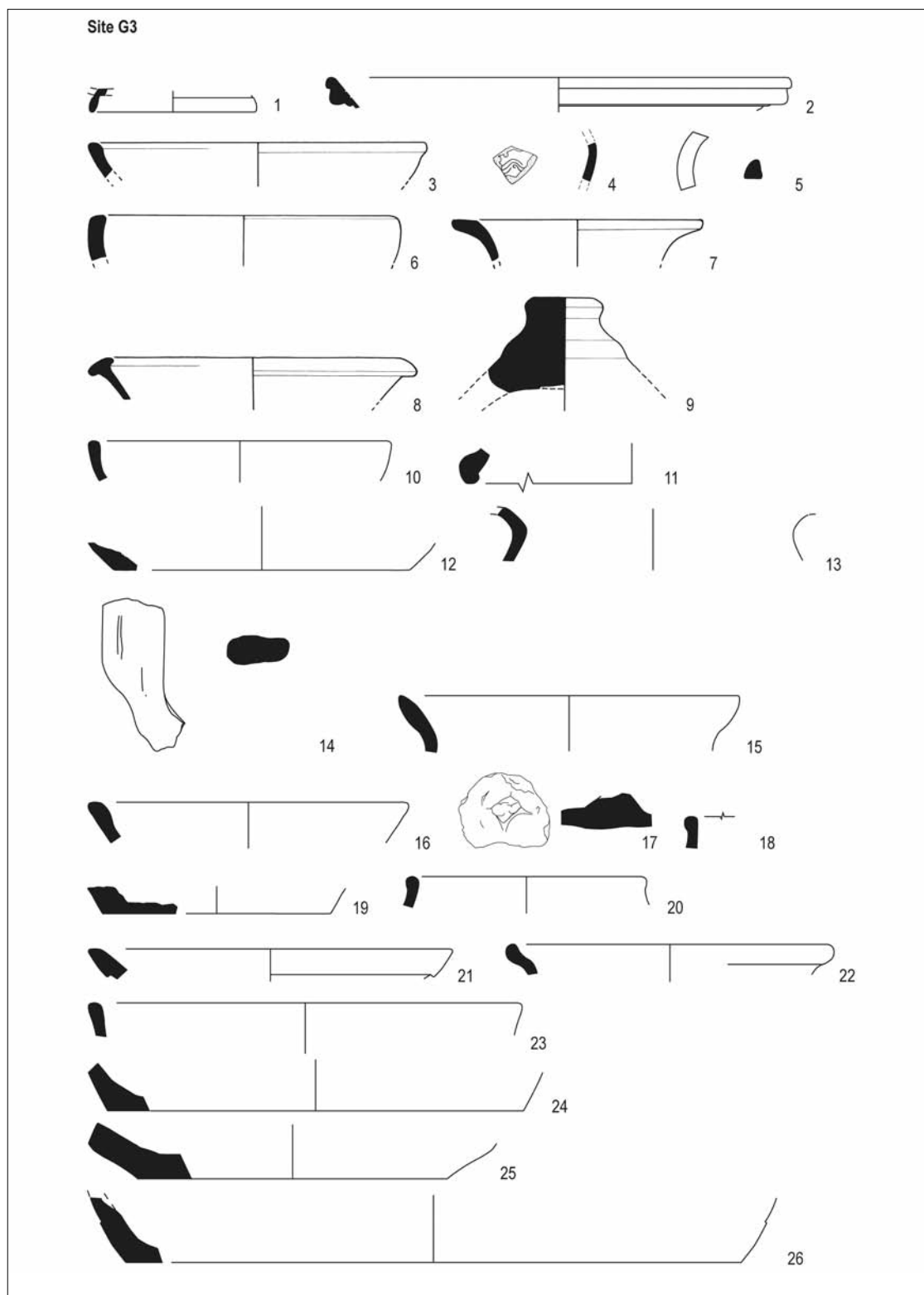
## Appendix V: Plates

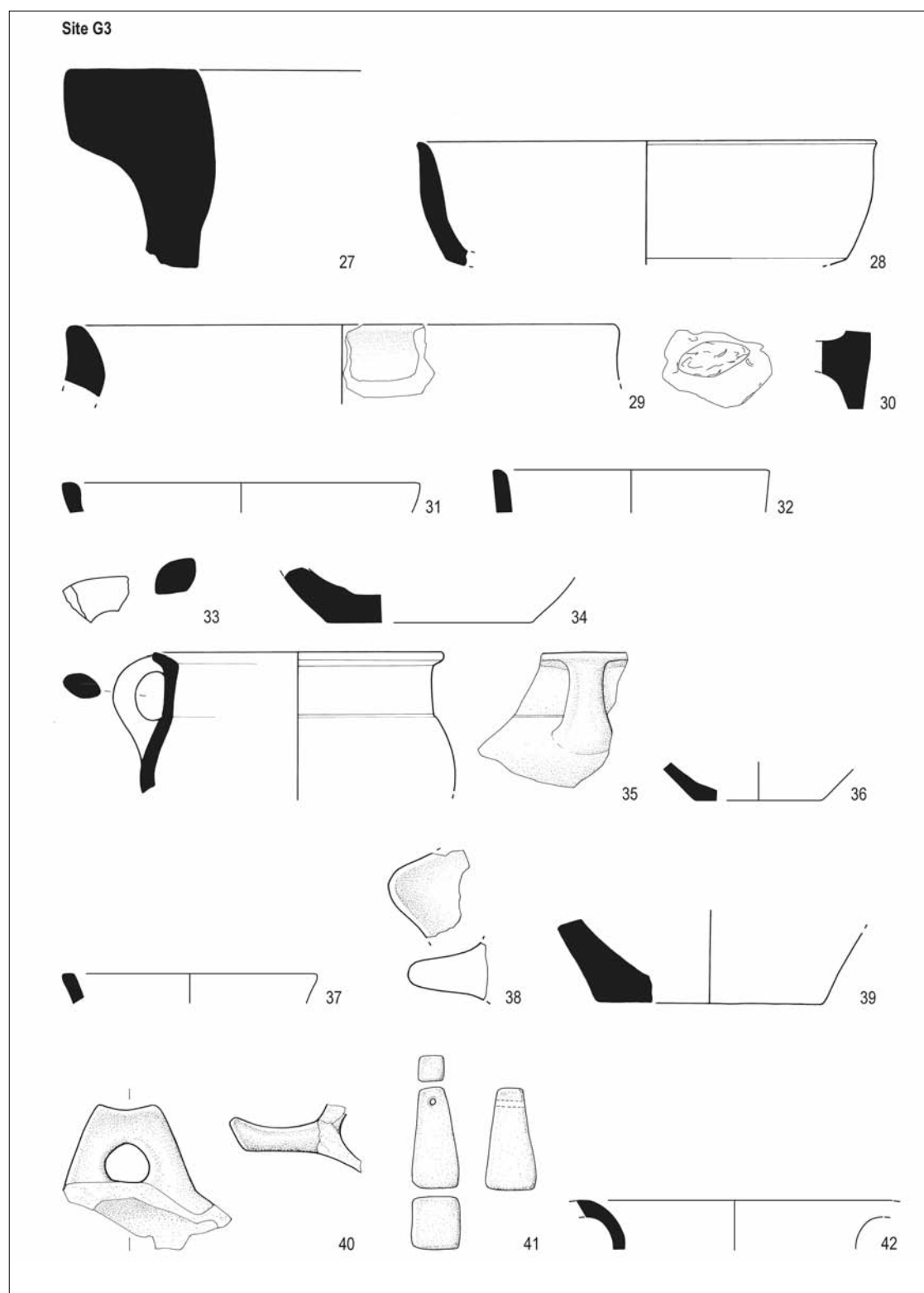
[Selection of finds from sites G1- G30]

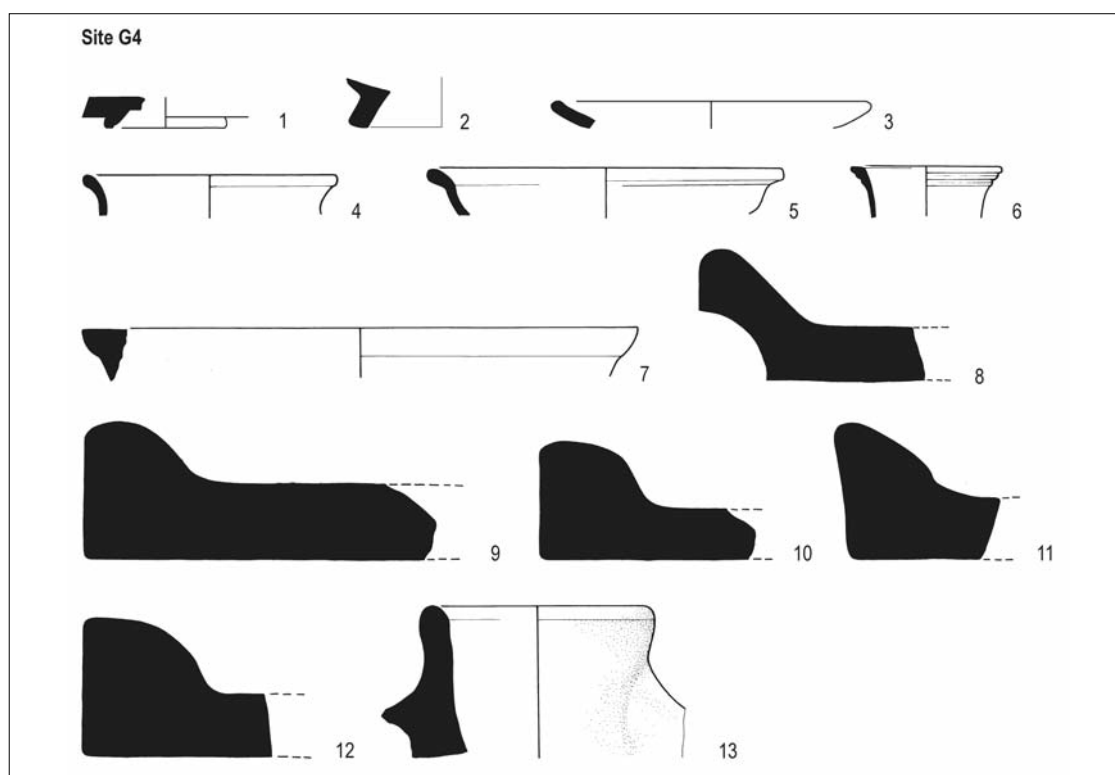
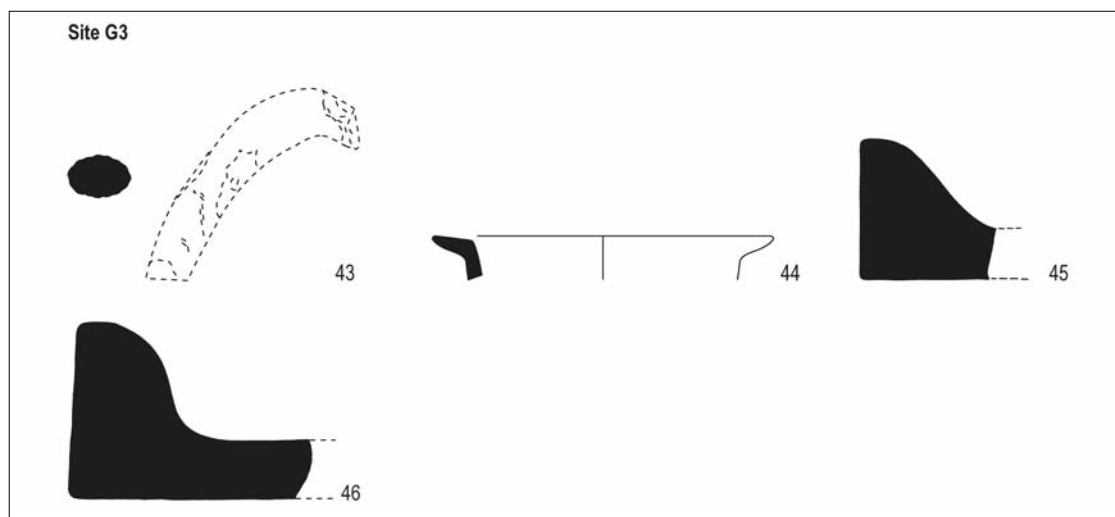






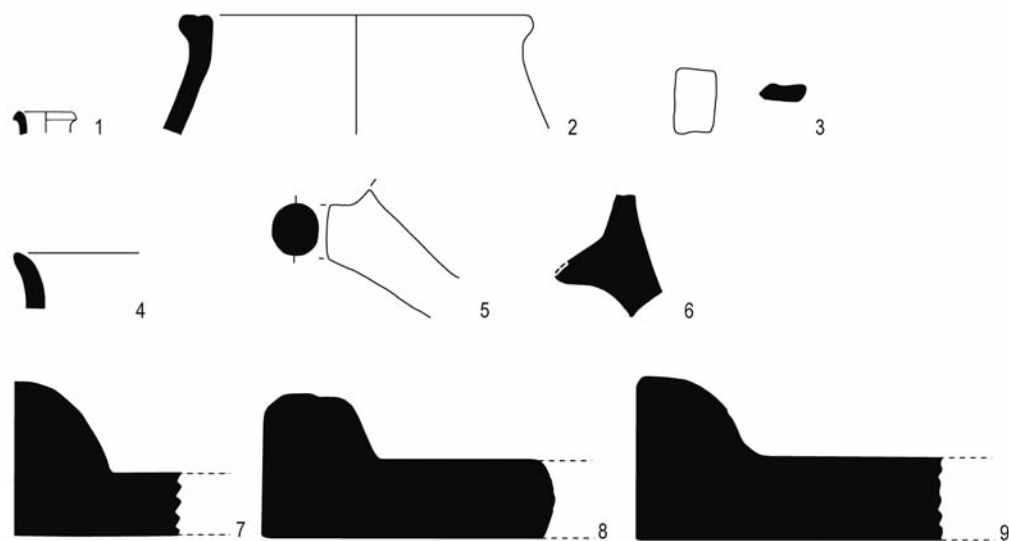




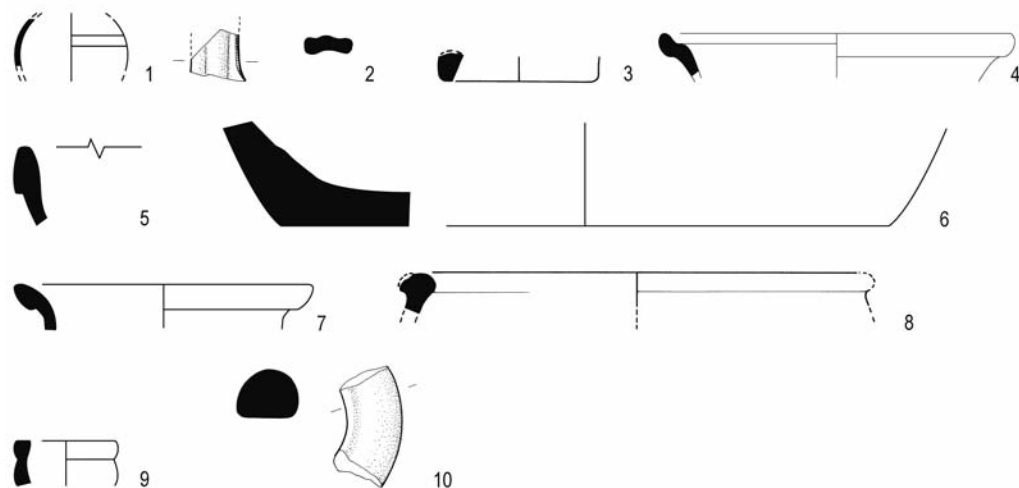


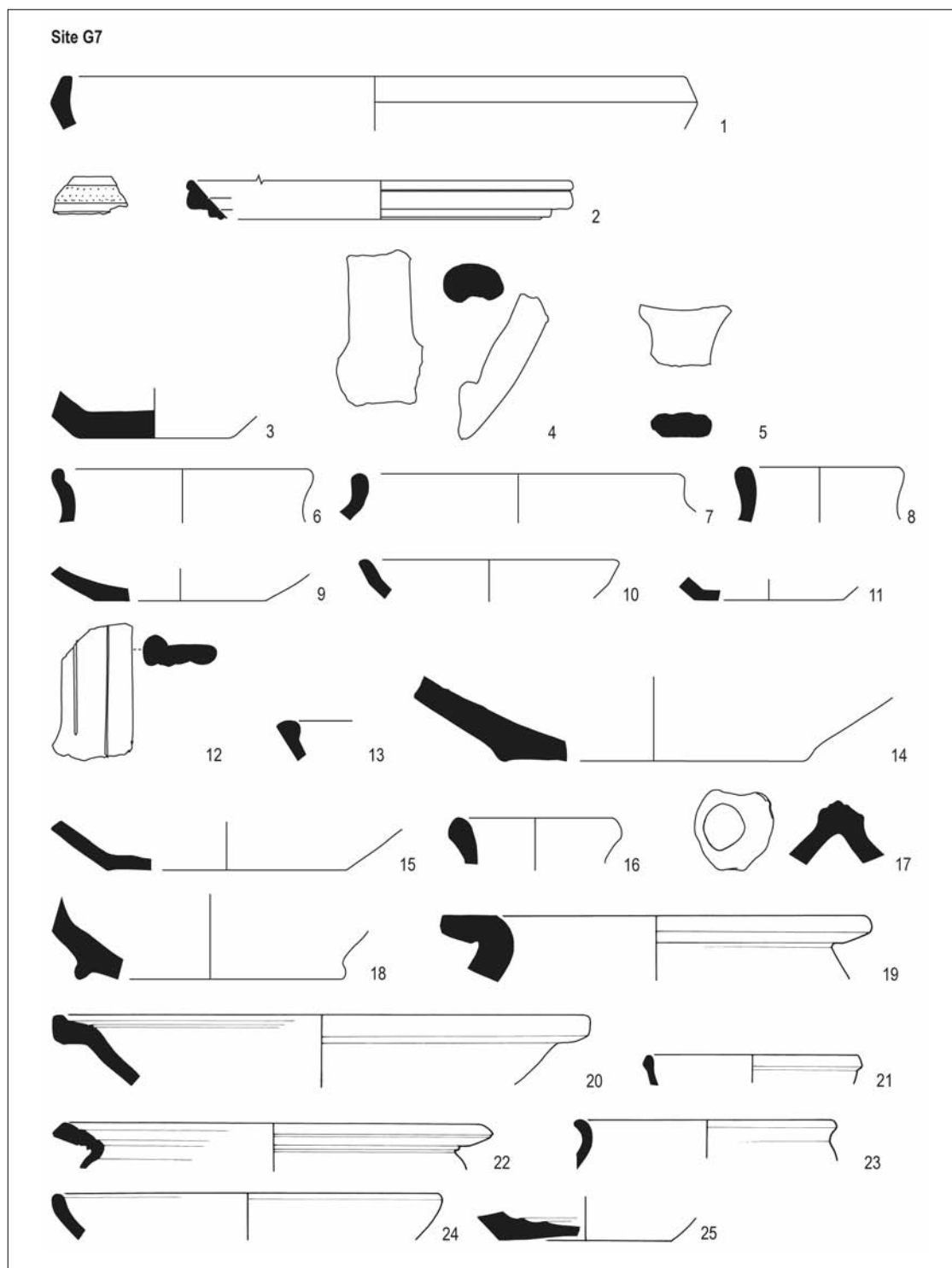


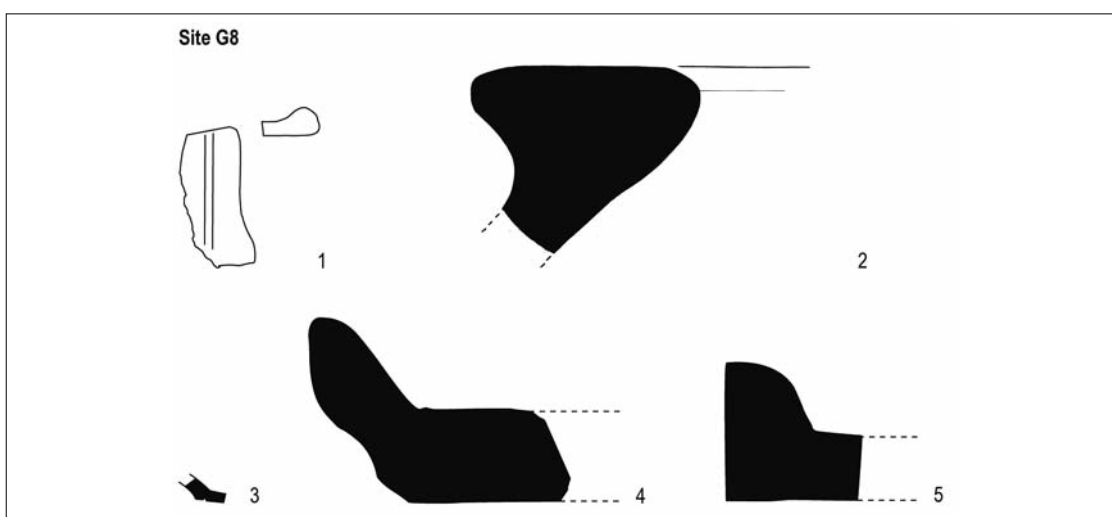
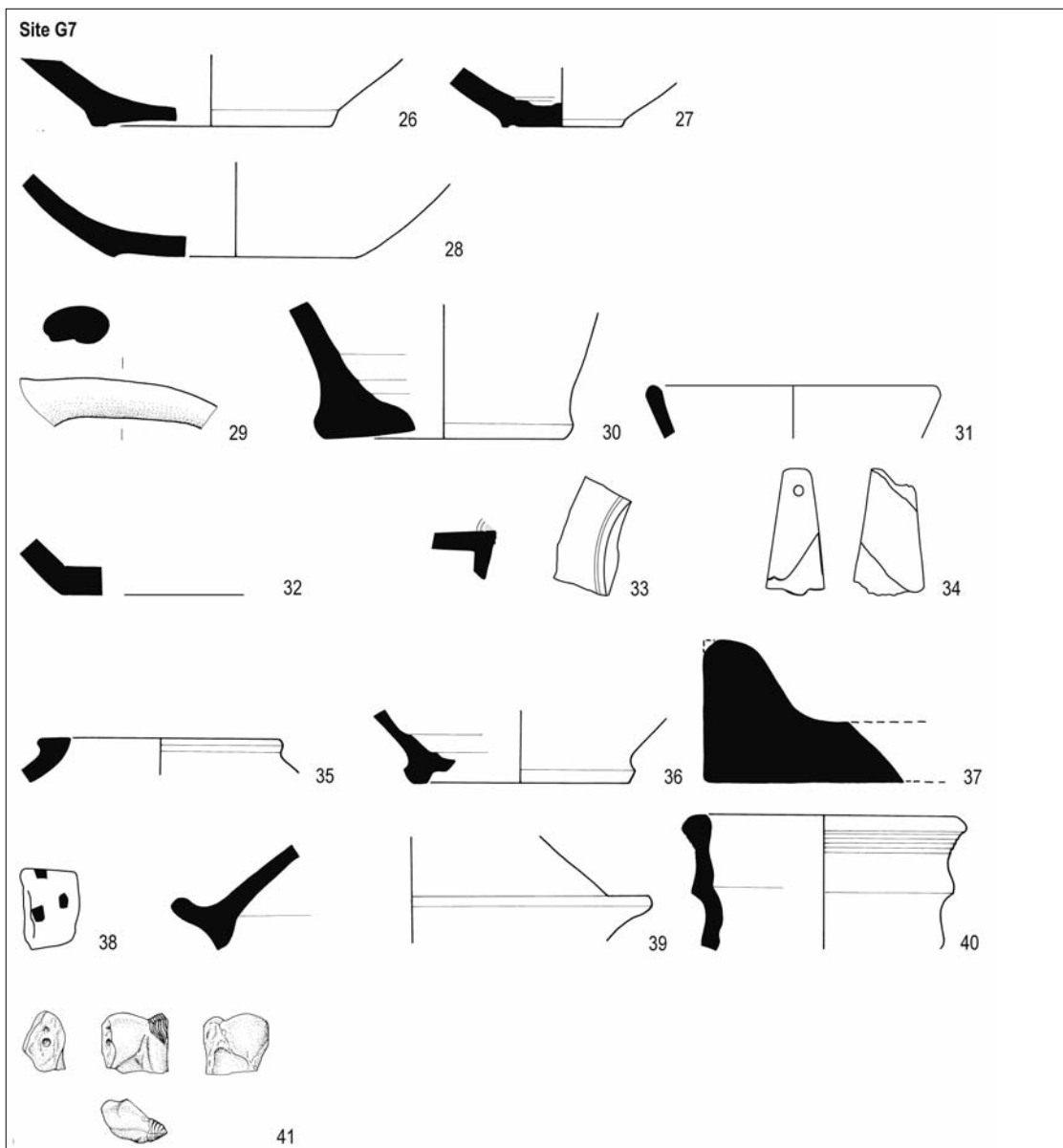
Site G5



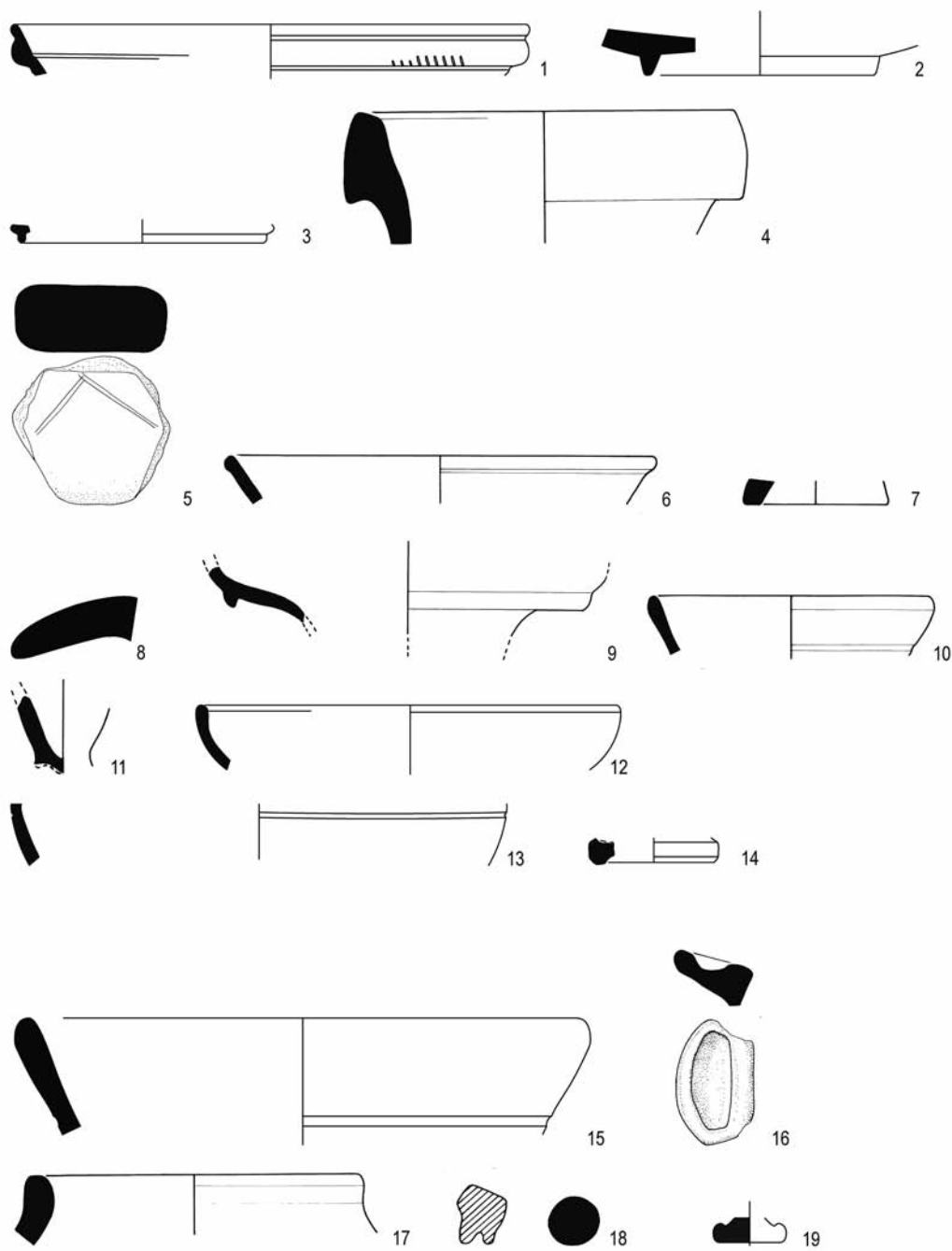
Site G6

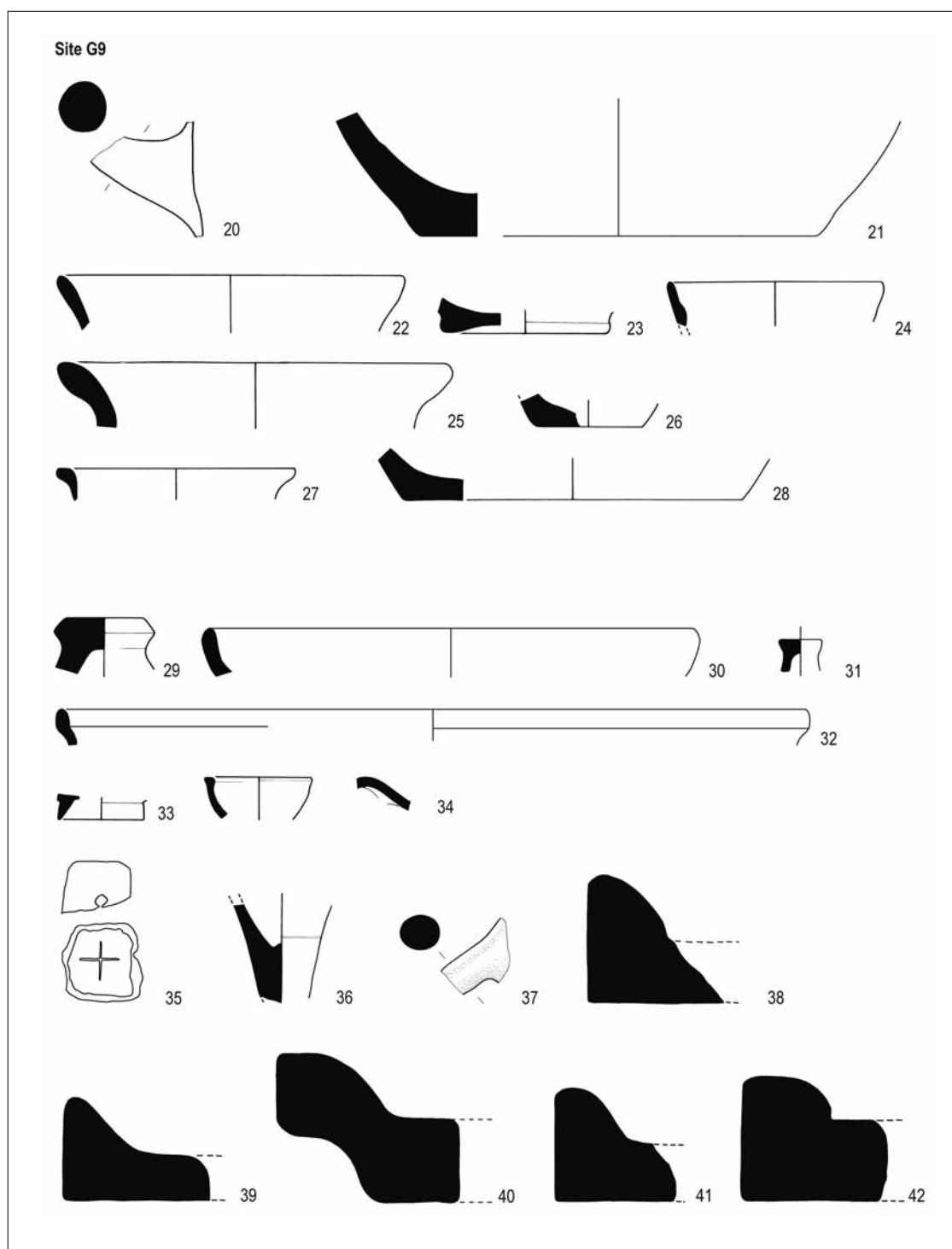


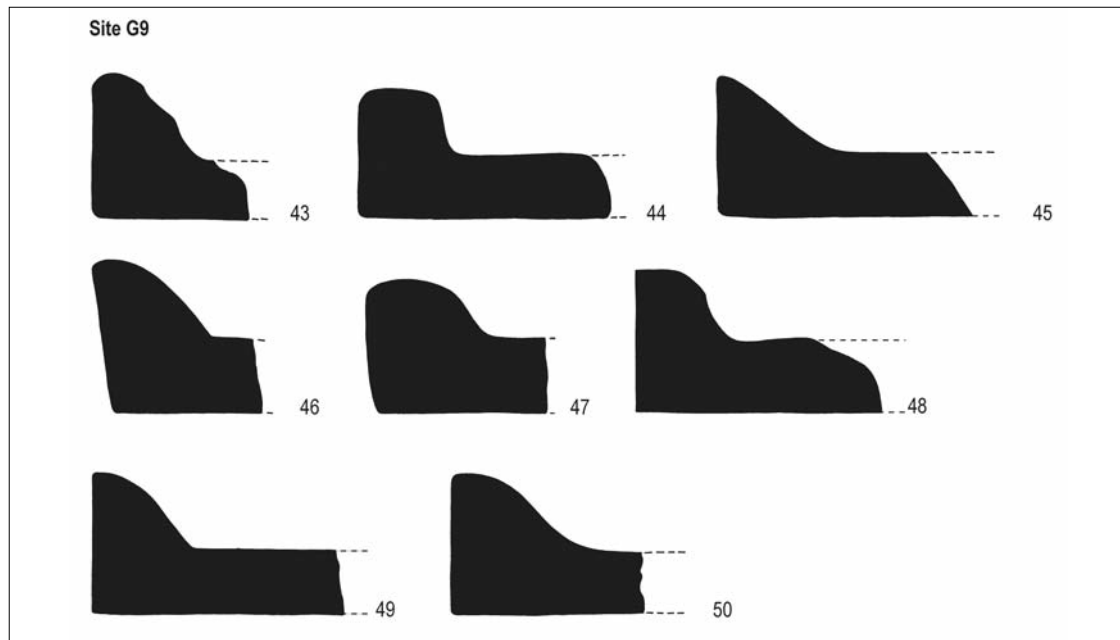


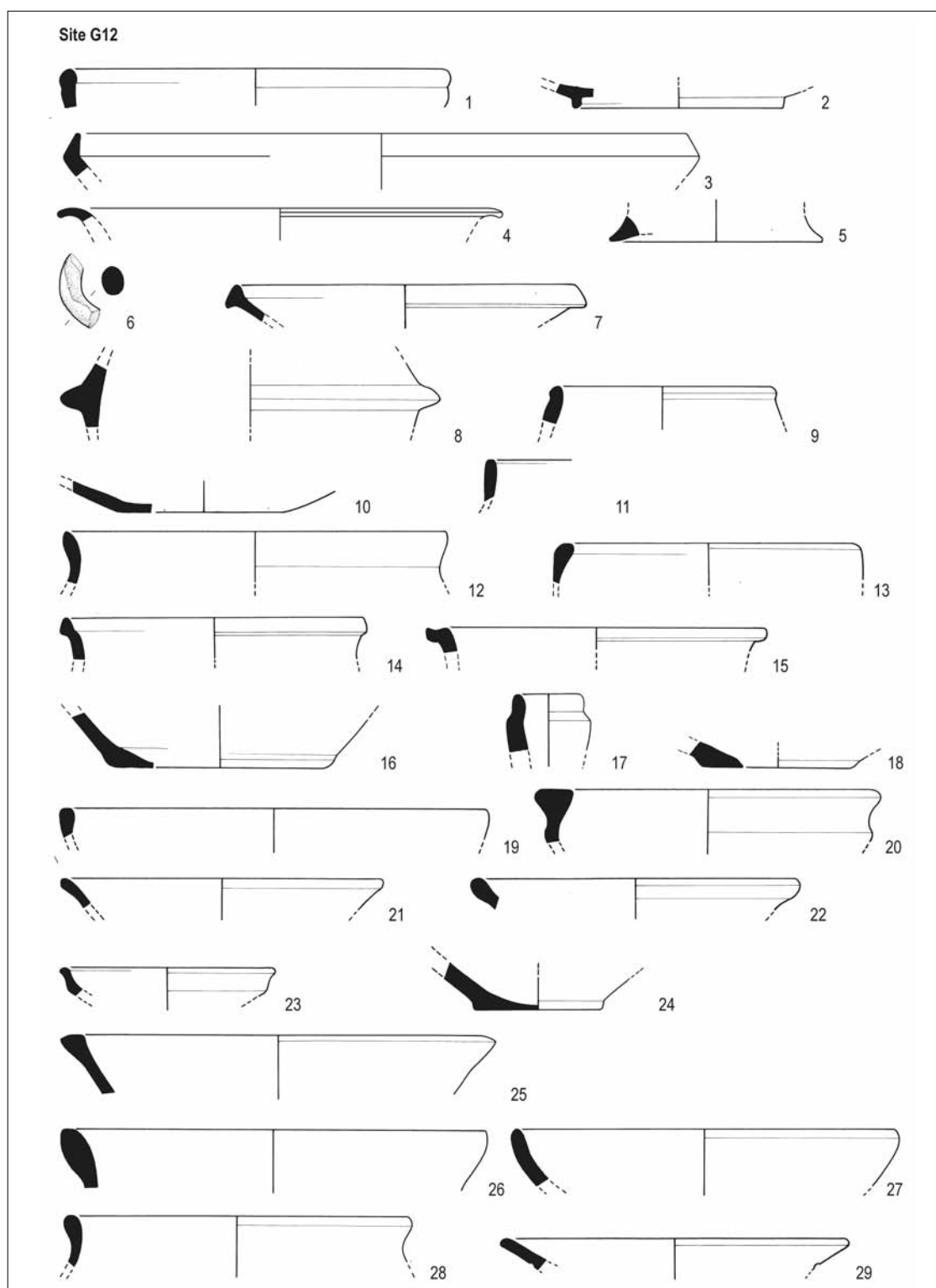


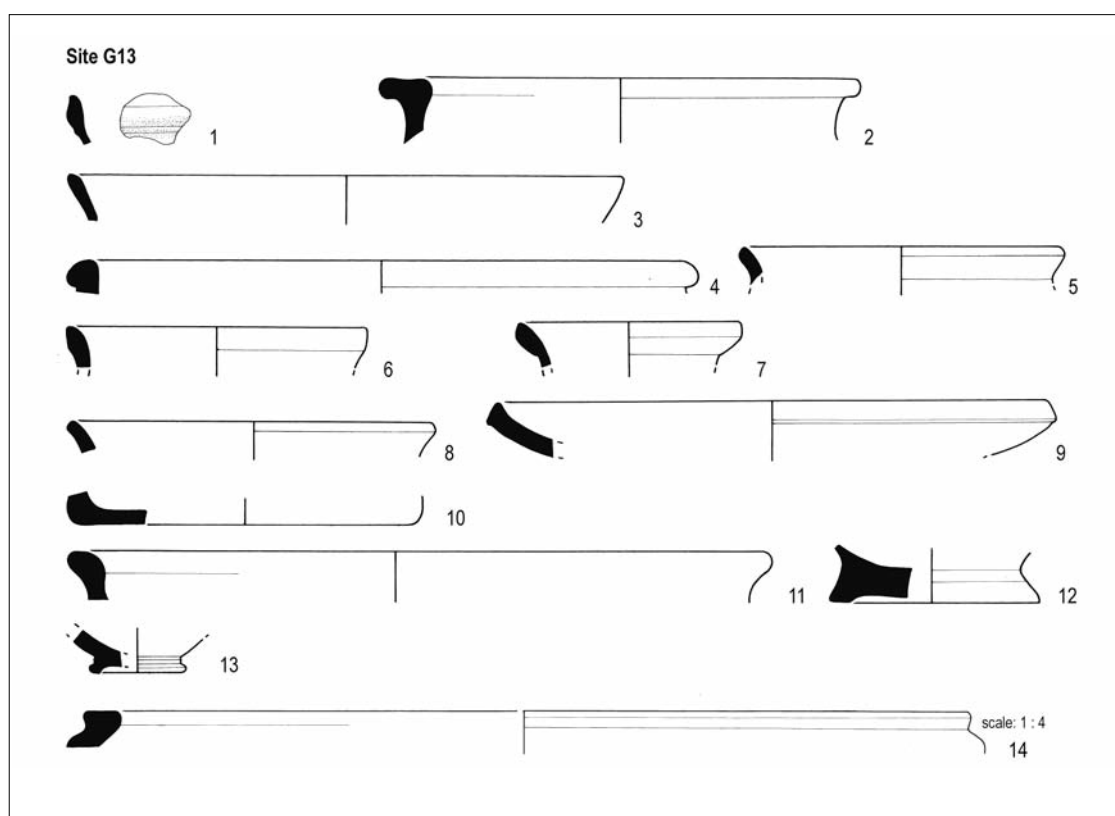
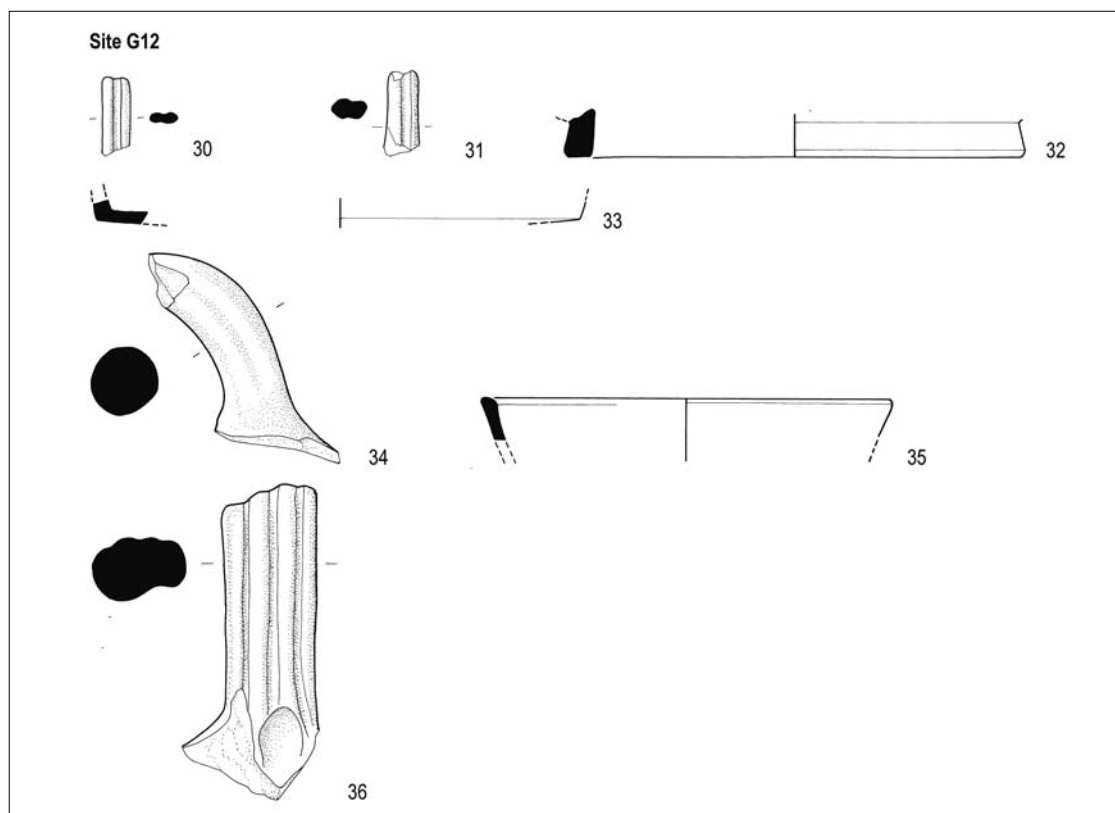
Site G9



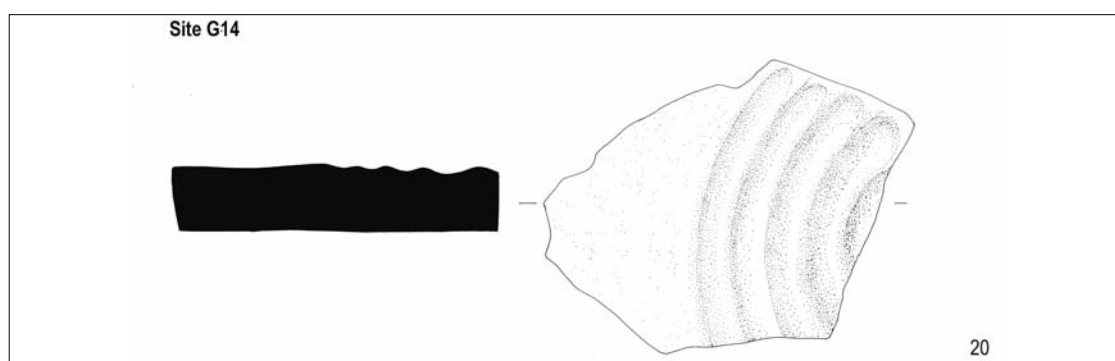
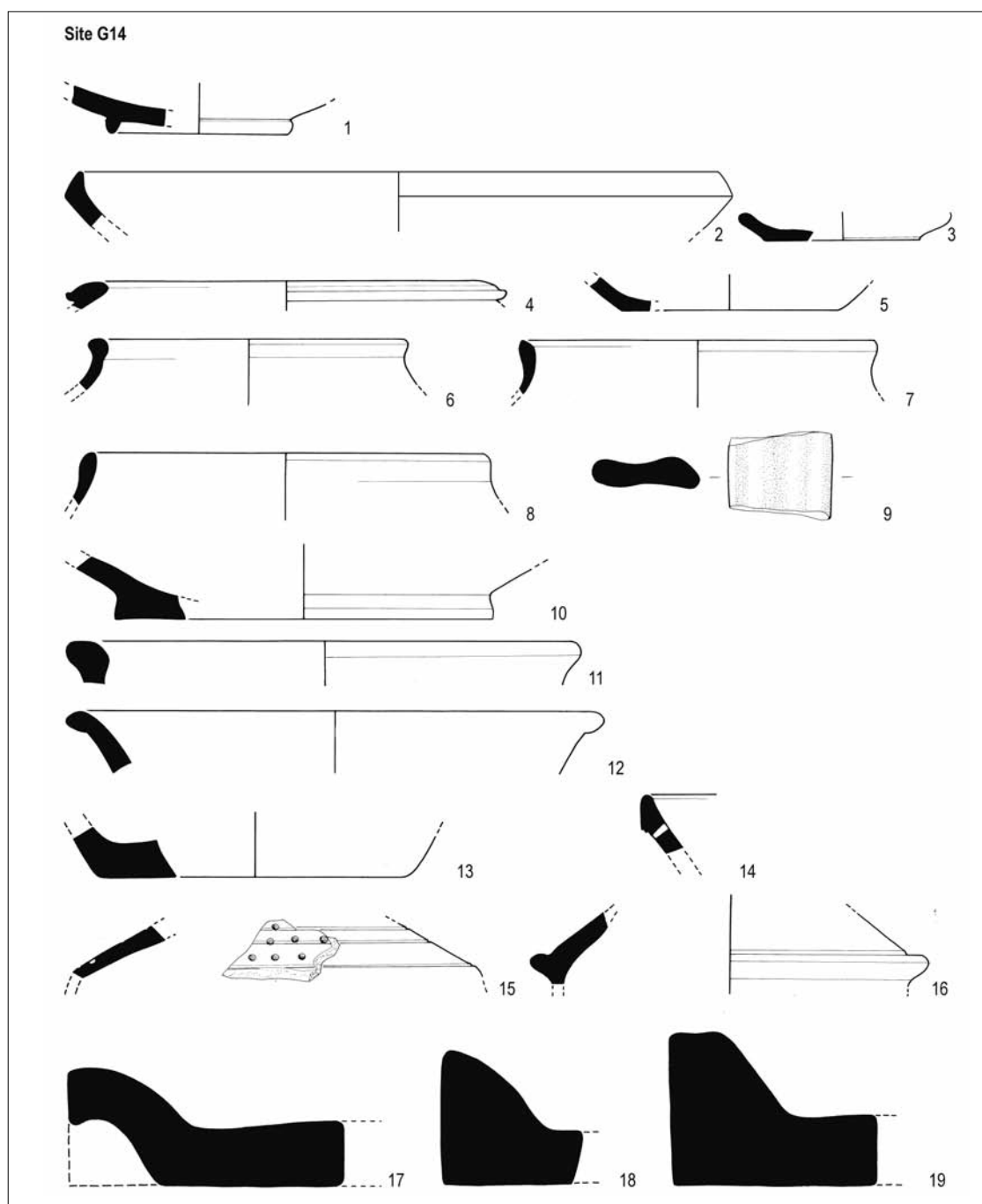


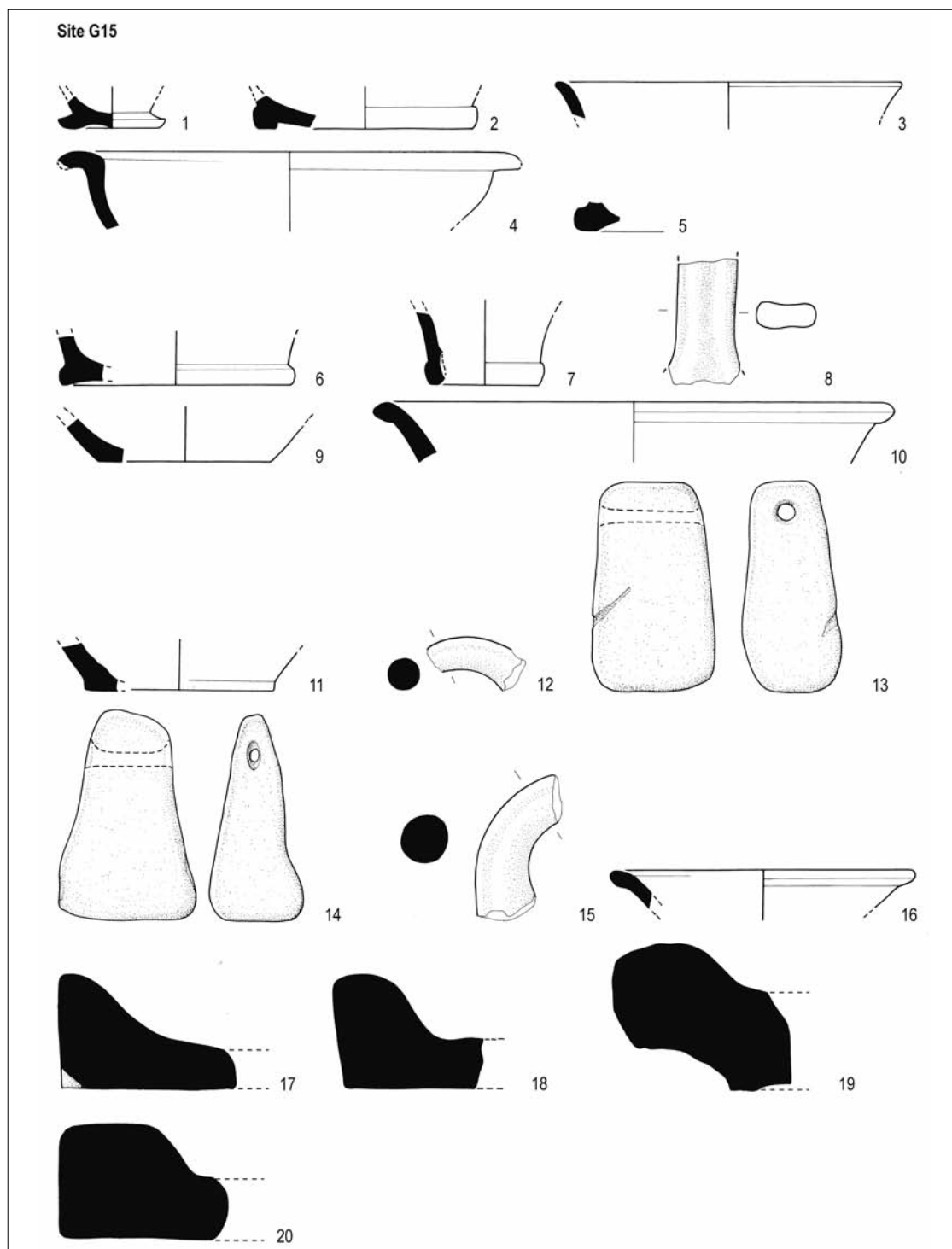


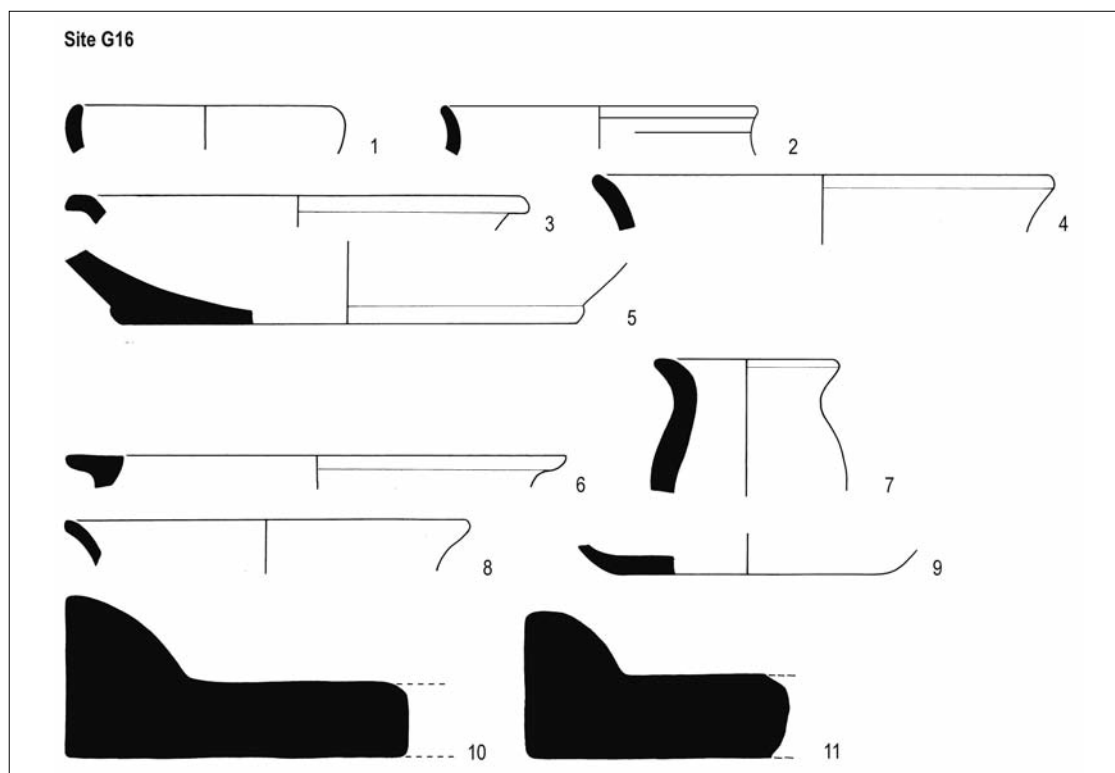


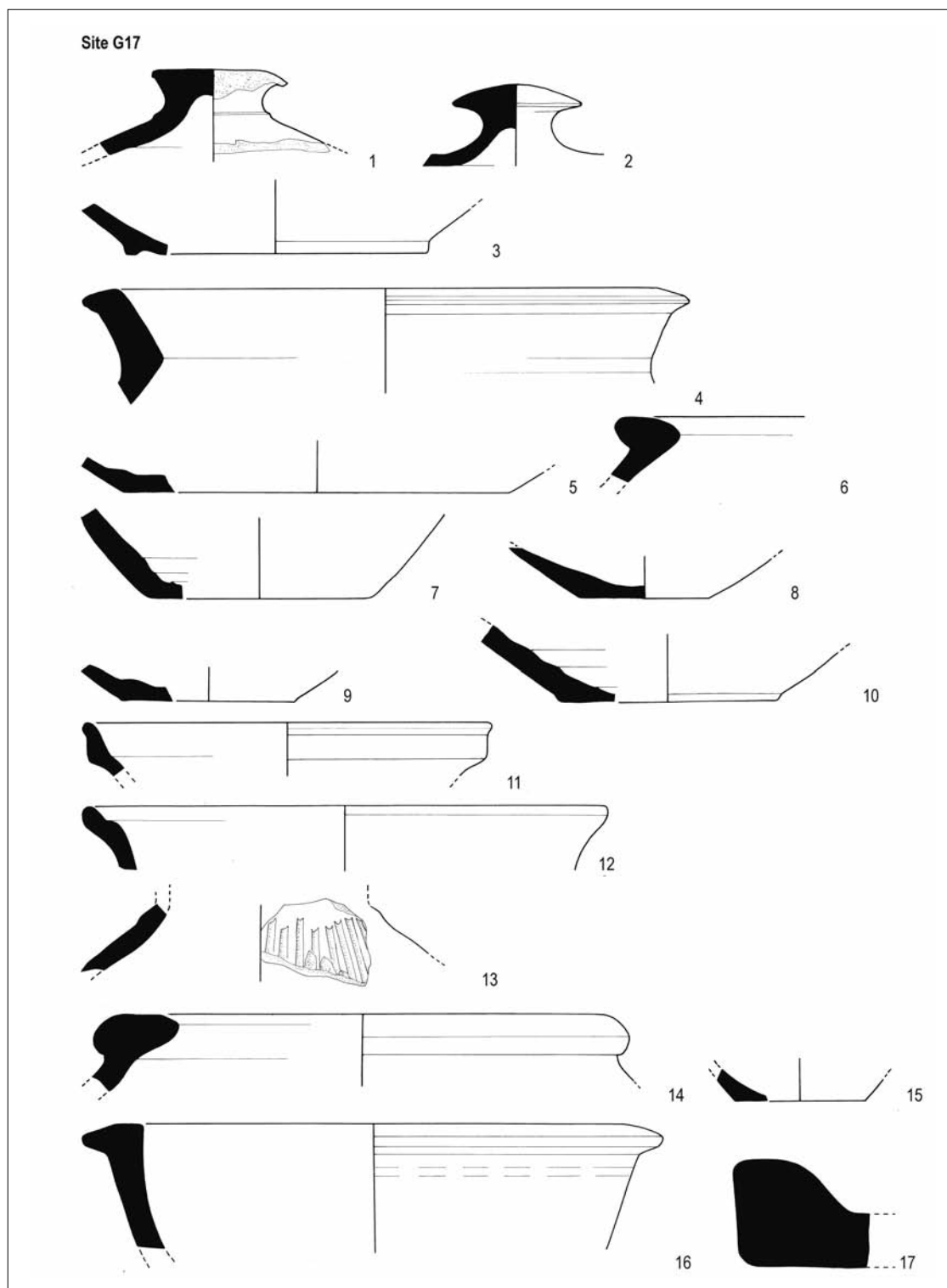




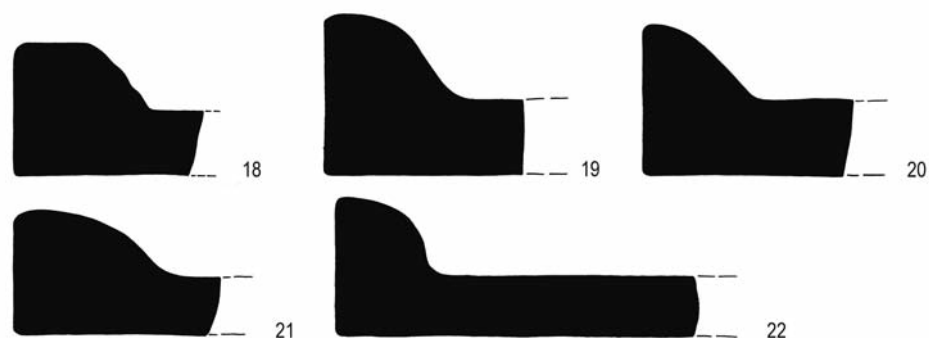




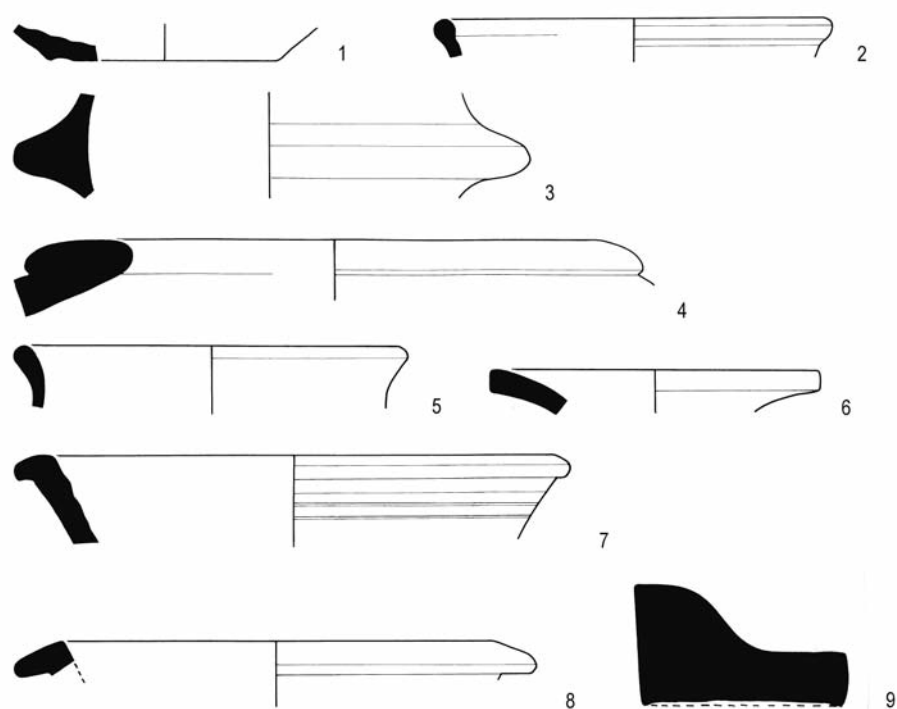




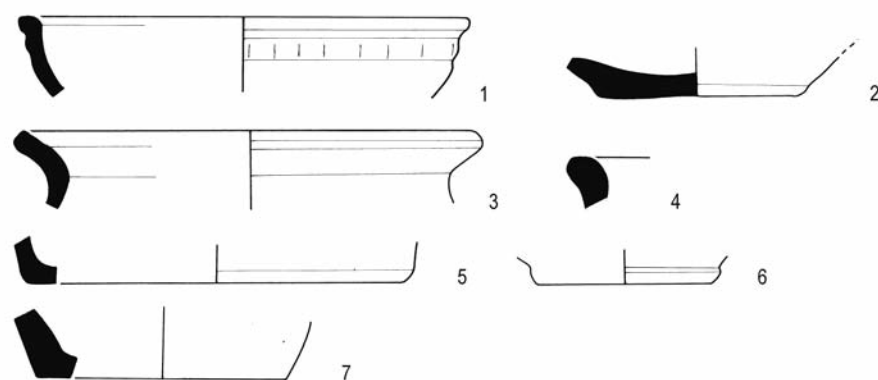
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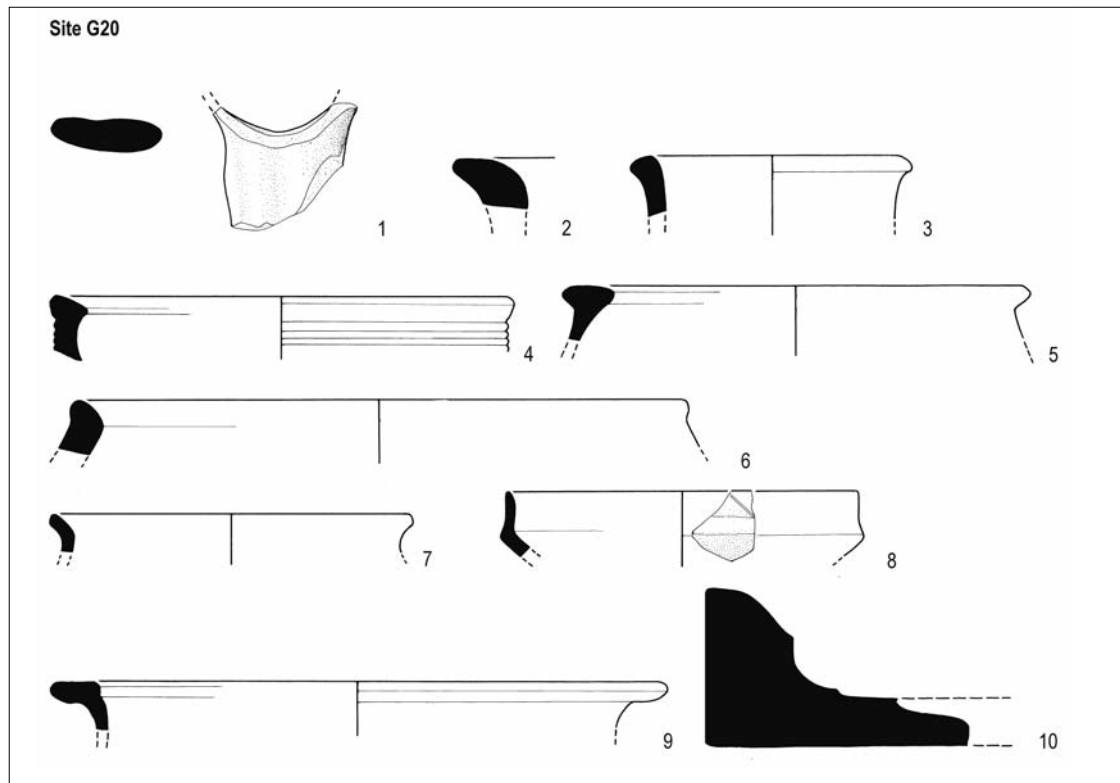


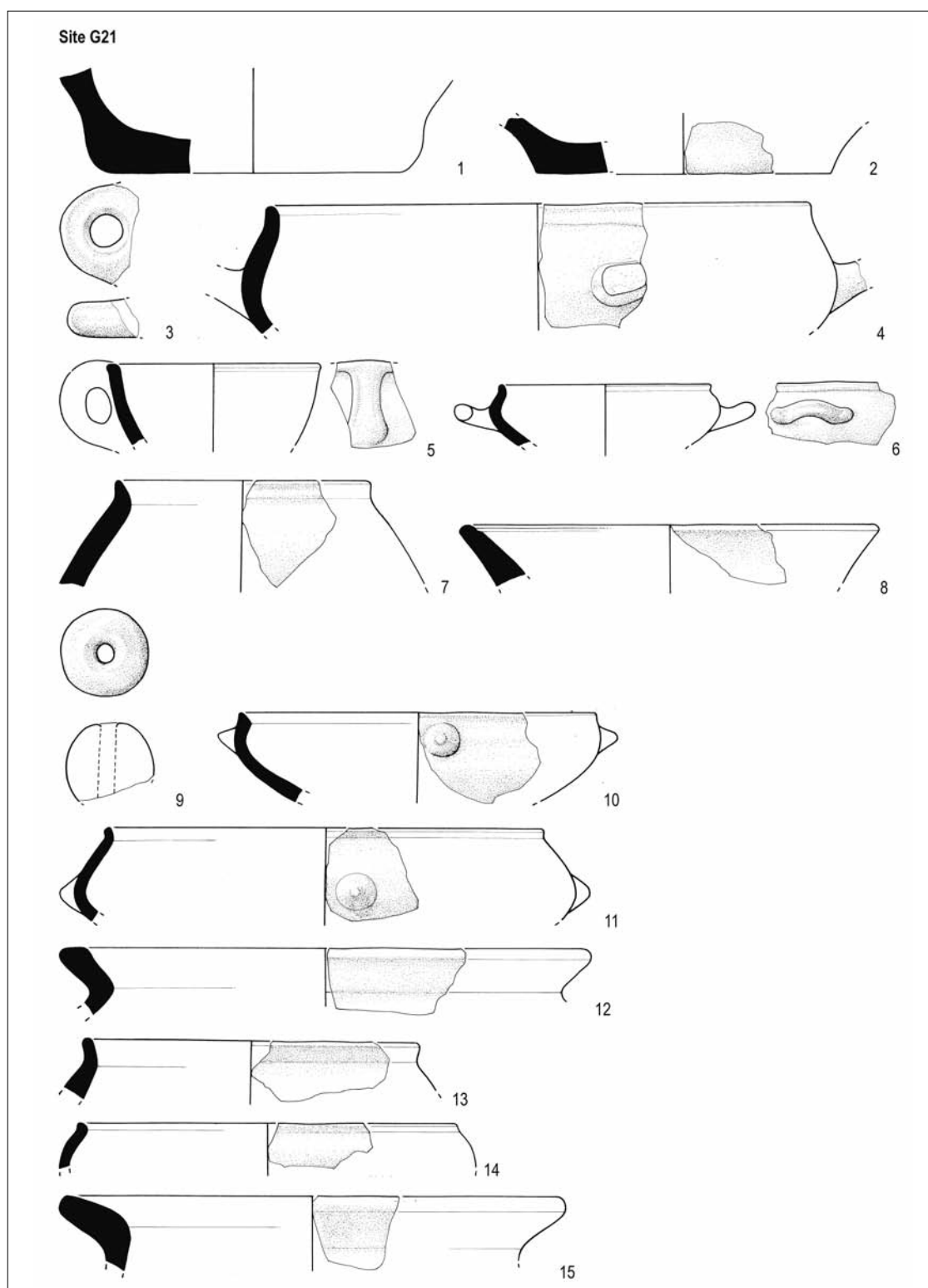
Site G18

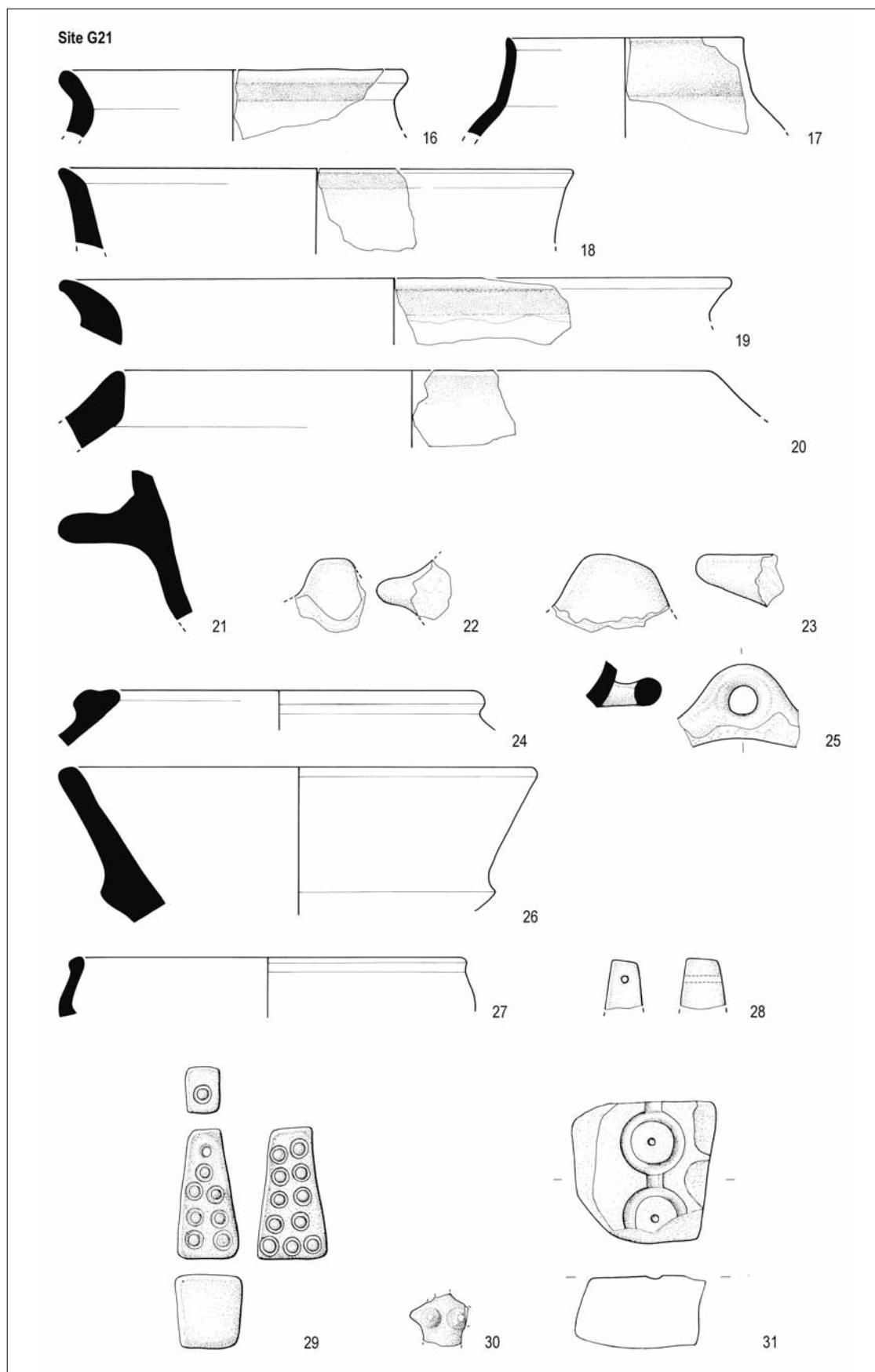


Site G19

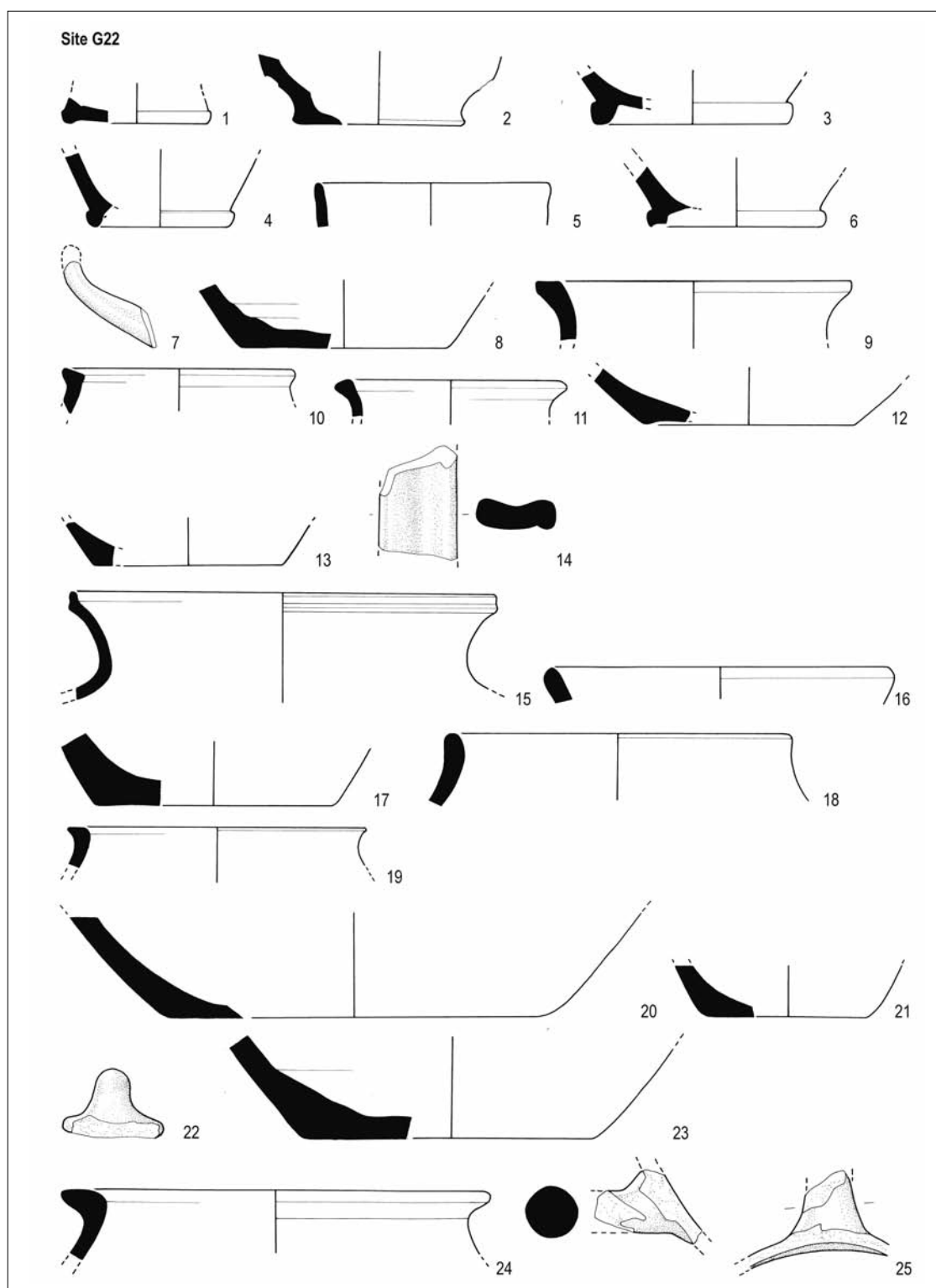


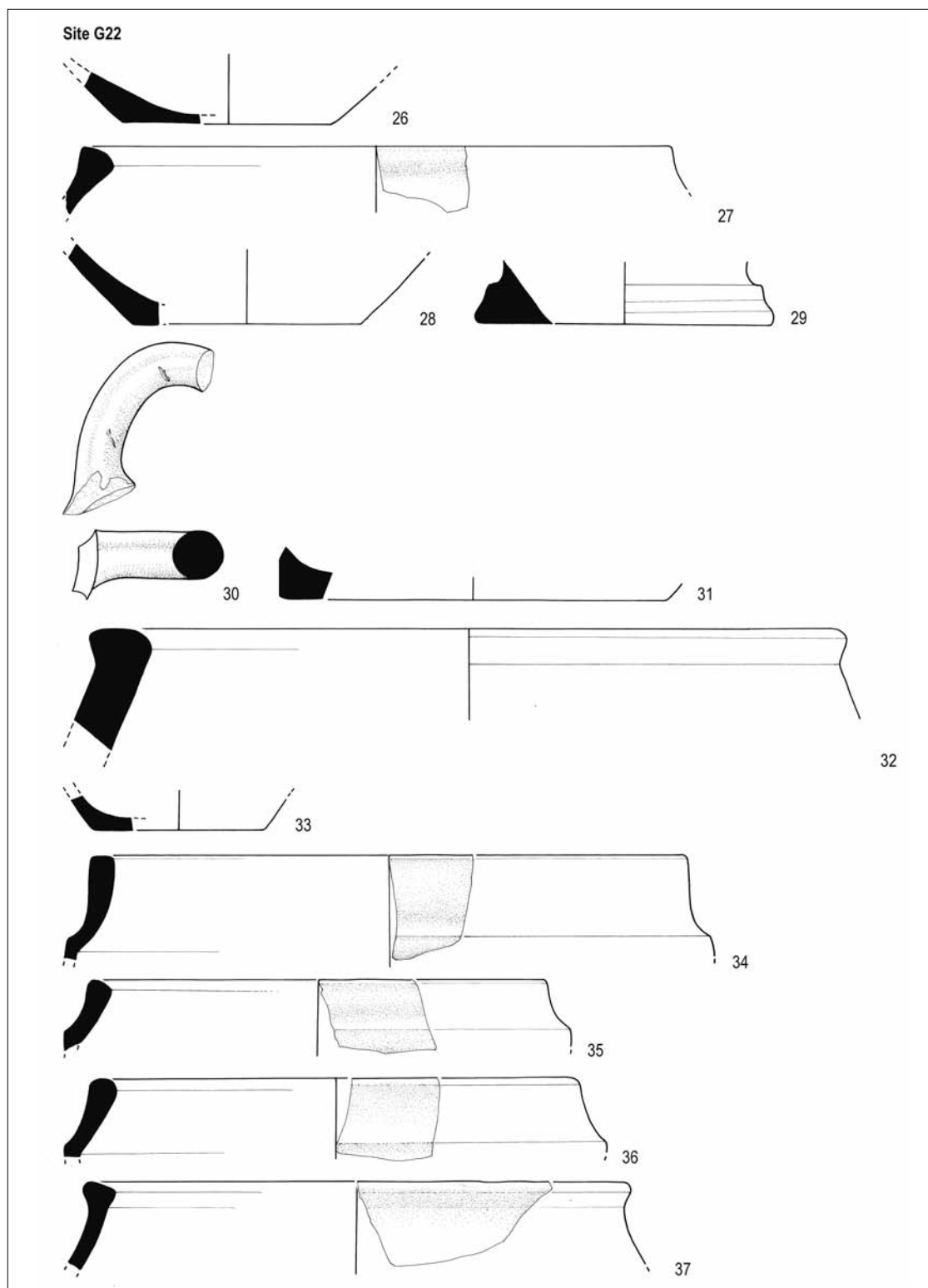


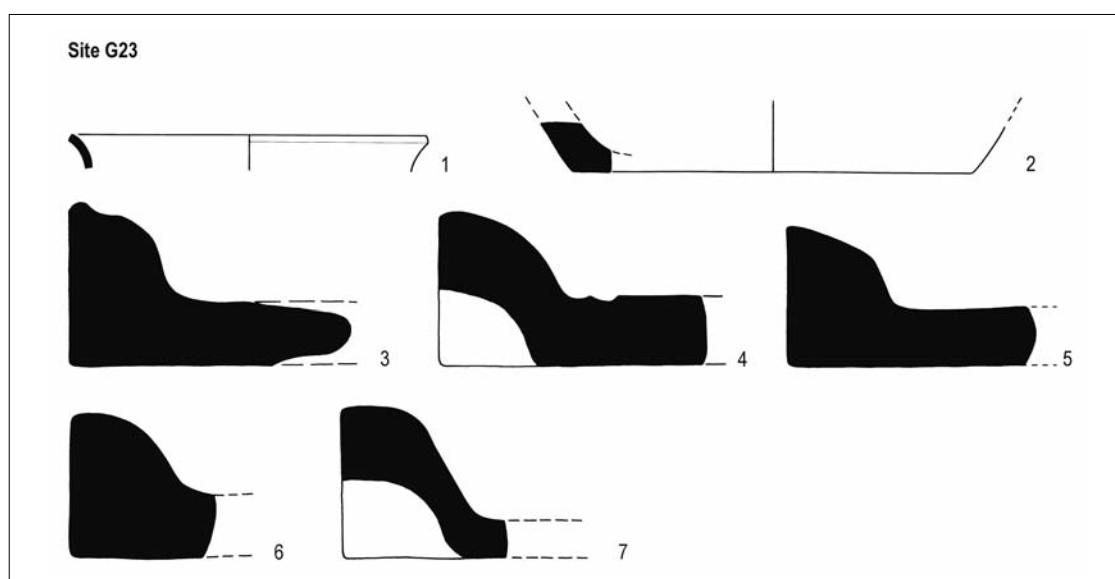
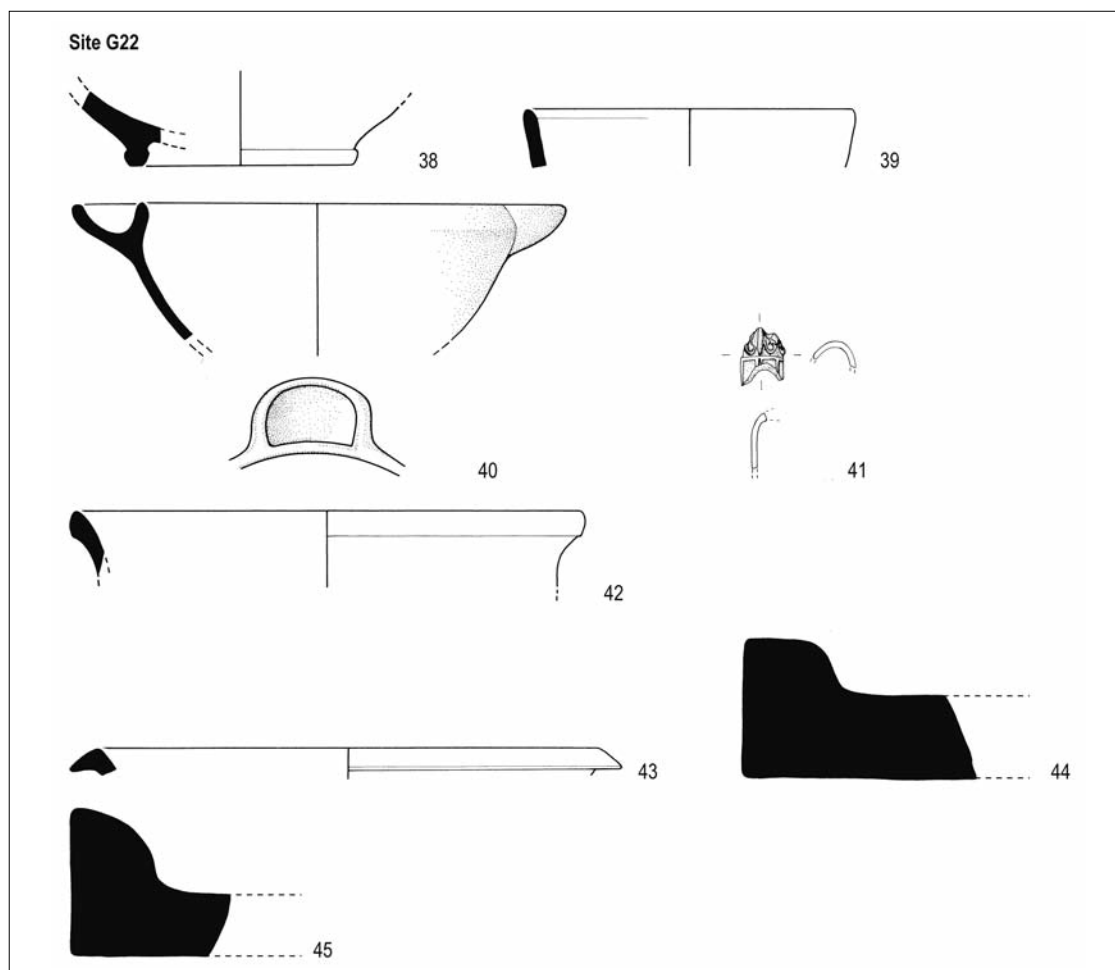


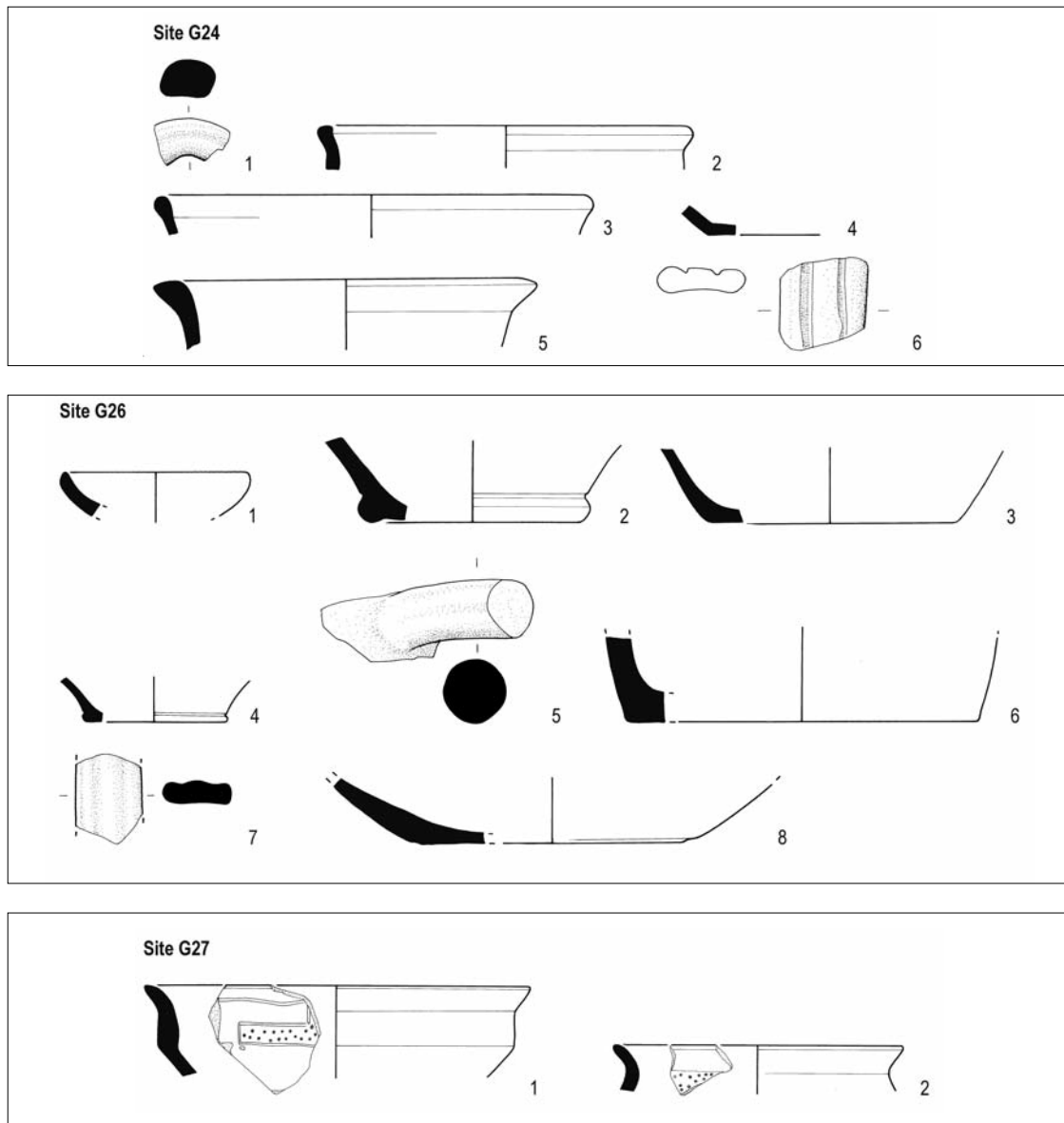












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